



THE Country GUIDE

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DECEMBER, 1951

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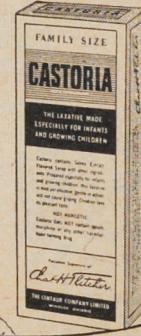
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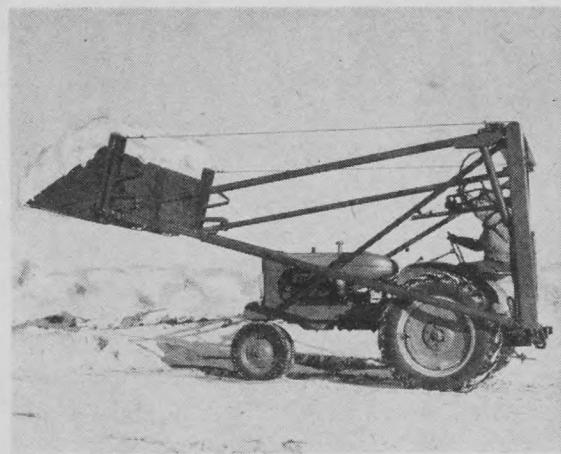
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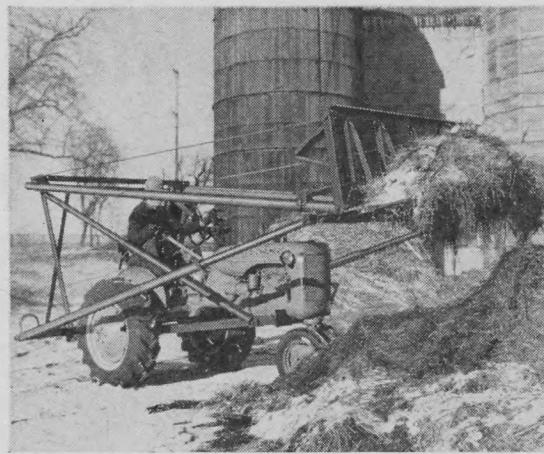
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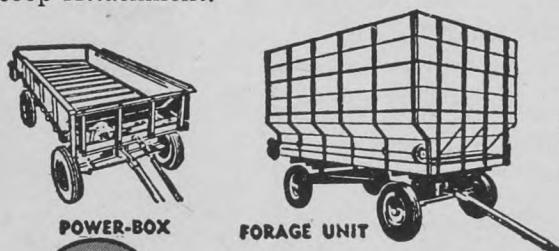
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Resale Price Maintenance

The MacQuarrie Commission recommends that this growing practice be legislated against in the public interest

RESAILE price maintenance is that trade practice by which manufacturers or importers of goods fix the retail price at which their products must be sold, and enforce penalties on retailers who do not observe the fixed price.

This practice was brought to public notice again by the government's announcement in the opening days of the session that it intended to bring in legislation concerning R.P.M. as a contribution to the fight against rising living costs. The proposed legislation was to embody the recommendations of an eminent commission appointed on June 27, 1950, under the leadership of Mr. Justice J. H. MacQuarrie of the Supreme Court of Nova Scotia. It was instructed to inquire into the workings of the Combines Investigation Act, and to say what amendments, if any, are required to encourage and safeguard Canada's free economy.

Immediately upon its appointment the Commission invited any and all who were interested to state their case with respect to R.P.M., a practice which had come under fire of the previous Royal Commission on Prices, and has since been condemned in a White Paper submitted to the British government by its own Board of Trade. The MacQuarrie Commission reports rather acidly that there was a great deal of divergence of opinion on the subject. With some notable exceptions, manufacturers, wholesalers and retailers favored a policy of hands-off. On the contrary, co-operatives, labor unions, farmers and consumer associations expressed opposition to R.P.M.

After stating the case pro and con clearly and impartially, the Commission declares that R.P.M. is extensively applied and of growing importance to Canada. It comes down on the side of the objectors by saying categorically that it eliminates competition among price maintained goods. It quotes in agreement the British White Paper:

"It is often said that the practice does not prevent traders from competing in the services they give. But this begs the question. It is true that, in order to attract more customers, a trader may increase the amount and quality of his service. But the potential customers may be comparatively indifferent to extra service, whereas they would be glad of the original amount of service at a lower price."

More damaging still, the Commission concludes that R.P.M. "facilitates, and makes more effective horizontal agreements among manufacturers."

Suppliers of a similar article, the report suggests, may agree among themselves openly, or otherwise, upon a retail price, and each of them separately may whip his retailers into line through the application of R.P.M. Indeed R.P.M. "is very often a necessary complement to agreements among manufacturers, because it would be quite useless for manufacturers to agree on a certain price for their respective products, if competition at the retail level disturbs the whole arrangement."

If adequately enforced, R.P.M. "establishes a private system of law

allowing no appeal to the courts of justice." If the government prosecutes a retailer for disregarding price controls, he may appeal to a court for redress. If a retailer is put out of business by the workings of R.P.M. there is no appeal.

The Commission holds that R.P.M. "contributes to price stability, but the level of prices so stabilized is higher than it would be under competitive conditions, and production more unstable." Chaos is transferred from prices to employment, according to one witness.

To the extent that R.P.M. brings more rigid and higher prices, it contributes to the reduction of sales, which serves neither the interests of manufacturers nor general welfare.

The Commissioners agree with the exponents of R.P.M. that it prevents two possible forms of monopolistic practices, namely, the use of monopoly at the retail level, and the "loss-leader" device. There is always an element of monopoly in small centers served by only one store. R.P.M. may keep prices down in this case, but the narrower spread of prices under R.P.M. is mainly achieved by bringing up the lower prices. R.P.M. affords protection to the more inefficient retailers in larger centers, where there is more competition, and thus multiplies the number of retail outlets. It may even encourage too many people to embark in retailing.

The Commission condemns the loss-leader device but declares that more direct and desirable weapons can be found to curb it than R.P.M.

THE Commission report holds that R.P.M. may be used by larger stores to expose small dealers to a more acute form of competition. The common policy of the department and chain stores seems to be to aim at a certain desired margin of profit for each department or unit. If the margins guaranteed by price maintained goods are above the general level, large stores may be put in the position where they can make heavy cuts on prices of those articles which are not price-maintained, and thus undersell small private retailers on those lines.

The case of the specialized dealer comes in for close consideration. An initial retail price may be more than cost of manufacture plus cost of distribution. It may include service charges throughout a greater part of the life of an appliance to assure satisfaction to the user. How much service is justifiable, and how much can be left to competition among retailers and how should it be paid for?

The Commission "is not convinced by the argument that the reputation of branded goods suffers from normal price variations and that people will think quality has deteriorated if prices are allowed to vary."

The Commission recommends, therefore, that it should be made an offence for a manufacturer or other supplier:

1. To recommend or prescribe minimum resale prices for his products;
2. To refuse to sell, to withdraw a franchise or to take any other form of action as a means for enforcing minimum resale prices.—P.M.A.



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The Winston home has some special guests, while Tom Beelby and young Pete have some complicated gift problems

Marion Winston, busy making stars from tinfoil and tinsel, said, "Isn't Christmas the most wonderful time?"

by
KATHERINE
HOWARD

Illustrated by
Robert Reck



MR. BEELBY was very happy. His grey eyes behind the thick lenses of his silver-rimmed spectacles regarded the 11-year-old Winston twins, Jimmy and John, with affectionate pride, as they sat at the big table in the kitchen of Cloverdell Farm, cutting strips from sheets of colored crepe paper.

Marion Winston, busy making stars from tinfoil and tinsel said, "Isn't Christmas the most wonderful time?" Her blue eyes shone and Tom Beelby thought she looked like an excited youngster herself, and not in the least like the mother of the twins, and Pete, the dark, quiet boy who had just passed his sixteenth birthday.

Tom cut several strips of crimson crepe paper and passed them across the table to Jimmy, who said, "What I like about Christmas is the smells! Turkey cooking, mince pies, 'n the smell of little Christmas oranges. Mmmmm!" His small nose crinkled.

"What I like about Christmas," said John sturdily, "is the presents."

"What do you like best about Christmas, Mr. Beelby?" asked Jimmy, his hazel eyes beaming on his idol.

Mr. Beelby considered. He could truthfully have said, "This is what I like best, Jimmy: Just being here at Cloverdell Farm with you and John, and Pete, and your mother." But he knew Jimmy would not appreciate such an answer, so he thought and then said slowly, "Well, music, I guess."

"Oh geel!" said John, lavishly splashing flour paste on a green and red paper chain, "Music! There's sure lots of that at Christmas. Nothing but carols on the radio. All day long they play 'em."

"Not radio music, John." Suddenly Mr. Beelby's eyes seemed to look far away, "I mean music you make yourself. Somebody playing, and everyone singing, 'God rest you merry, gentlemen,' or 'Silent Night.' When I was your age, a long time ago, Christmas wasn't Christmas unless we had music that somebody made."

"Guess there wasn't radios then," said Jimmy, casually, and suddenly Mr. Beelby remembered that he would be 56 in a few weeks' time, and it was a long time since he was 11 years old.

He laughed and reached for another sheet of crepe paper, then he saw that Pete was sitting in the big brown chair by the stove, looking steadily into space.

Tom turned toward the boy. "What about you, Pete?" he said gently, "What do you think is best about Christmas?"

"Eh? O! Beg pardon, Mr. Beelby! What did you say?" Pete seemed preoccupied, "I . . . I was . . . thinking about something."

Across the table Tom caught a significant glance from Marion's blue eyes. He remembered what she

"Something you can thank your lucky stars you never will be, Jimmy," said Tom Beelby, and Marion said quietly and gravely:

"A D.P. Jimmy, is a displaced person, someone who has been driven away from her home and come to live in another country. Someone you should feel sorry for and be very kind to."

"Well, that's all right then, said Jimmy complacently, "Cause Pete's kind to Wanda. He's going to buy her a present for Christmas." Pete got up suddenly, from his seat by the stove, and with an angry glare at his little brother, went marching off upstairs to his own room.

"Don't worry," said Tom to Mrs. Winston, as he noticed the little trouble lines begin to creep across her forehead. "I'll find out what it is in the morning."

But Pete forestalled Tom's questions. As they were in the kitchen together, early the next morning, Pete waiting for the yellow school bus that took the pupils to the consolidated

school in Lyndon, ten miles away, and the twins racing about outside in the yard, Pete said, "Mr. Beelby, what can I get for that girl's present? Wanda Hertz, I mean. We each draw a name and we have to get a present to give at our Christmas party at school this afternoon. I've drawn her name. What can I get her?"

Tom looked at Pete's dark, earnest face. "Well, hankies, maybe or a book. Didn't she give you any idea what she'd like?"

"I asked her," said Pete, "what she wanted for Christmas, and she said 'An A string for the violin.' Can you beat that?"

"An 'A' string," repeated Tom, then he said, "Well, that's easy. You've no problem. You can get a string for the violin at the drug store in Lyndon at noon, and there you are . . . She must play the violin, this little girl!"

"I don't think so," said Pete. "She's never said she did. Anyway, I guess I can get an 'A' string in Lyndon . . ." (Please turn to page 32)

Christmas at Cloverdell

had said to him that morning.

"Something is wrong with Pete. He has something on his mind. I hope . . . it isn't school that's bothering him."

TOM considered the gangling boyish figure in T scarlet school sweater and khaki slacks, and thought how worrying adolescence could be, when John broke the silence by blurting out, "Pete's mad 'cause Lynn Davis is sore, and Lynn's sore 'cos Pete has to buy a present for the Wiennese girl."

"For who?" said Marion, startled curiosity getting the better of grammar, "Who? And what on earth is a 'Wiennese'?"

"He means Viennese," explained Jimmy, his freckled face breaking into a grin. "She says 'Viennese' because she's foreign."

Sudden enlightenment spread across his mother's pretty face. "You mean the little girl who has come to live on the old Douglas place with her father?"

"That's her," said Jimmy. "She's a D.P. What's a D.P. mom?"

ONE of the outstanding deficiencies of prairie agriculture, especially in the drier areas, is a satisfactory pasture grass. If a grass could be found which would remain green all summer, stand pasturing from spring until fall, possess relatively high nutritive quality throughout the season, and be drought-resistant, long-lived and able to crowd out weeds, it would be an improvement over anything we now have.

Russian wild ryegrass possesses these qualities, and from work now under way at the Experimental Station at Swift Current, Saskatchewan, appears very promising.



A seed crop growing in three-foot rows at Swift Current.

This grass is a new pasture grass for western Canada. It has proved to be as drought-resistant and as long-lived as crested wheatgrass, and so far there are indications that it will occupy an important place as a pasture grass for summer and fall grazing in the drier parts of the prairie provinces. When compared with native grassland, Russian wild ryegrass gives greatly increased production and will produce more beef per acre than native grassland alone. Its resistance to long dry periods is equal to that of the native grasses, and its recovery after such periods is more rapid. Moreover, its feeding value is high in late summer and fall, when other cultivated grasses are generally of low quality.

Although comparatively unknown to farmers, this grass is not new to western Canada. An introduction of it was recorded at the University of Saskatchewan in 1926. It was introduced into the United States in 1927, and both introductions came from the western Siberian Experiment Station at Omsk. Further introductions were made in 1934-35.

The natural distribution of Russian wild ryegrass is believed to center in Siberia. It also occurs in Russia, Turkistan, north and central Asia and Mongolia. Crested wheatgrass occurs in the same general area of dry steppes and steppe slopes. A Russian publication observes that "it is well eaten in the early spring and late fall; the hay is of medium quality."

Russian wild ryegrass is a long-lived perennial bunch grass. The leaves grow mostly from the ground, and very few are found on the seed stalks. Indeed, these seldom form when Russian wild ryegrass is grown in solid seedlings. If it is grown in rows, however, the seed stalks are generally from two to four feet long. On reaching maturity, the seed shatters readily and falls to the ground. The plant has fibrous roots which are coarser than those of crested wheatgrass and penetrate the soil to a depth of from eight to ten feet. It takes longer for Russian wild ryegrass to really establish itself than does crested wheatgrass, but once a stand is obtained, it is extremely persistent and will crowd out other plants, including weeds.

AT the Swift Current Station, an experiment was conducted to test the ability of grasses to compete with each other. Russian wild ryegrass invaded plots of brome grass, intermediate wheatgrass, slender wheatgrass and tall wheatgrass. After five years, it was equal to crested wheatgrass in its

A New Dryland Pasture Grass

Russian wild ryegrass is drought-resistant, long-lived, deep-rooted, stays green all summer, and appears very promising

by R. THAINE and D. H. HEINRICH

ability to compete. Both grasses, moreover, were able to crowd out the other grasses with which they were seeded. Furthermore, it would seem that these two grasses can be seeded together and both will remain in the stand for many years.

Because Russian wild ryegrass produces an abundance of leaves at the base, but few on the stem, it is relatively difficult to harvest for hay. Further, the hay yield is generally low; hence it is expected that it will find a place in western Canada principally as a pasture crop.

It has a remarkable ability to remain green throughout the summer, and to retain a high nutritive level until late in the fall. In 1949, for example, the protein content of Russian wild ryegrass in August was 12 per cent, while that of crested wheatgrass was 6.5 per cent. This characteristic, together with its ability to make a rapid recovery after cutting or grazing, may make the grass particularly valuable for summer and early fall pasturing.

GRAZING trials conducted in Montana show that lambs grazing on Russian wild ryegrass produced a greater live weight gain per acre than those on tall wheatgrass, orchard grass, Alta fescue, or Fairway crested wheatgrass. Over a five-year period in North Dakota where yearling Hereford steers were pastured, Russian wild ryegrass showed a slight increase over crested wheatgrass, both for grazing days per acre and total live weight gains. Such results illustrate the value of this plant when utilized for pasture. Indeed, there is probably no greater criterion for evaluating a forage plant than live weight gain per acre, which is the end result that determines the value of any forage crop to the livestock feeder.



A typical plant of Russian wild ryegrass.

Because cultivated grasses are assuming increasing importance in Canadian agriculture, as well as in the agriculture of the United States, investigations into the possible advantages and disadvantages of this grass are under way in both countries. In all probability, a number of years will be required before the best ways of using and managing this crop can be fully understood.

From the work already done, however, it is apparent that investigators are not in complete agreement as to how Russian wild ryegrass can be used most advantageously in a pasture program. Some have suggested sowing it in a



Regrowth at Lacombe two weeks after taking off a seed crop.

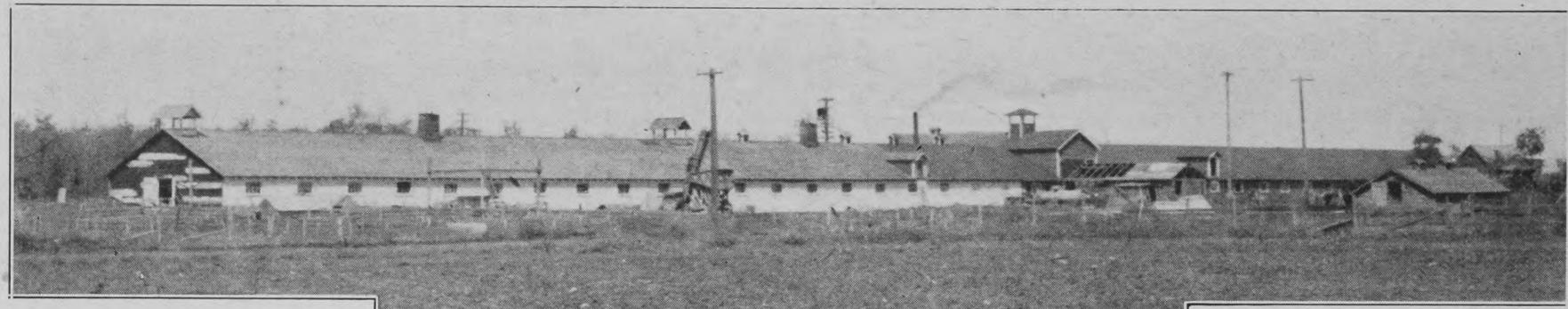
mixture to prolong the grazing season. The argument is that it would be eaten sparingly in the spring in any case, because it is relatively less palatable than other cultivated grasses at this season. From midsummer on, however, it would become the main source of palatable forage because other grasses are largely dried up.

ANOTHER method of grazing proposed, which is supported by the preliminary investigations at Swift Current, is to seed the grasses in separate stands, or in simple mixtures with alfalfa. In this way, each grass can be utilized according to its seasonal growth habit and feed value. One could easily conceive of three pastures, one of native grassland, another of crested wheatgrass, and a third of Russian wild ryegrass. In such a case, the pasturing would be about as follows: crested wheatgrass from early spring until mid-June, then the native grassland from early June until August, and after this the Russian wild ryegrass could be pastured until mid-September, when the crested wheatgrass would provide excellent pasture again.

It will not be long before farmers themselves can discover how Russian wild ryegrass best fits into their own farming programs. How the livestock on the farm is organized will largely determine pasture needs of the farm, and for this reason the use made of any particular grass on one farm might very well differ from that on another.

Since the beginning of agricultural development in western Canada, grassland has been looked upon as a cheap source of feed for livestock. Very little thought has been given to grassland management and the improvement of pastures to increase carrying capacity. The productivity of native grasslands can be maintained at a maximum by proper management, but beyond this level it cannot be increased. Nevertheless, recent experiments have shown that if a portion of the native pasture is replaced with cultivated pastures and suitable rotational practices worked out, the total quantity of forage produced can be increased greatly over the present production from native grassland alone. A good pasture is an integral part of every farm where livestock are kept. Further, it is most important to keep this pasture in a highly productive state. Fortunately, we are at present in transition toward more productive grasslands which will be managed as a cash crop to be marketed through livestock.

Low-producing native range has no place on a mixed farm, where culti- (Please turn to page 25)



[Guide Photos]

THREE is an economic theory designed to explain why hog numbers fluctuate widely. The theory is that when hog prices are good relative to feed costs, production is sooner or later stepped up. The additional supply of hogs is not balanced by an increased demand for pork, and prices fall. Faced by lower prices, the least interested producers go out of production and the price bobs up again. The intervals between hollows—or peaks—take about five years.

No one suggests that actual practice follows this pattern exactly. It does, however, point up the "in and out" procedures that often cause sharp swings in hog prices.

The most obvious weakness of this type of production is the large proportion of those who in-

Bill Lesyk, Edmonton, feeds some 3,500 pigs a year through his 600-foot barn . . .

ture, speaking at the advanced registry swine show and sale recently held in Saskatoon, predicted some further softening of hog prices.

Dramatic successes have been attained by producers who went into hog production and stuck with it. In many cases men who have specialized in hogs have found that they could secure a bigger net return from hog production than from other types of farming.

This has been proven many times, and particularly in Alberta. It is not just by chance that Alberta goes in for hogs. It costs a lot to ship grain to market, and hogs convert from five to seven pounds

and equipment. This means that a producer makes no money until he sells the sixth pig from a litter.

They have also found that only about three out of each four pigs farrowed were raised to market age, so that if two pigs die out of a litter of eight, the sixth pig represents the only profit there is in the litter. The extra pigs in a large litter are the source of most of the profits in hog raising. A large number of small litters will be very much less profitable than fewer big litters.

The man who raises pigs and averages six pigs to the litter may not make much money; the man who averages nine, or even eight, will do very nicely.

BILL LESYK of Edmonton, Alberta, averages between eight and nine pigs per litter, and the

Pigs Pay if:

producers pay attention to management details, raise large litters and have good quality pigs. Wm. Lesyk, Edmonton, and other breeders, have proven this many times

by RALPH HEDLIN

crease their pigs and find that prices have slipped badly before they have pigs to sell. When they have market pigs, prices are down, and by the time prices rise they are again out of production. They decide, often unwisely, that they cannot make money out of hogs.

A statistical device, known as the hog-barley ratio, has been designed to indicate the probable returns from hog feeding. The long-time average "ratio" for the years 1913 to 1939 was 18.3. This means that 18.3 bushels of No. 1 feed barley has, on the average, over a period of 27 years, been equivalent in price to 100 pounds of B-1 live hog at Winnipeg. It is reasonable, therefore, to believe that a fairly efficient producer can make some money out of hogs when the ratio is not below this long-term figure.

Many producers do not pay too much attention to this important device. In 1944, the year when hog marketings in Canada reached an average of 731,000 hogs per month, the ratio averaged 18.2. In 1939, when an average of only 302,000 hogs were marketed per month, it took 27.0 bushels of No. 1 feed barley to equal the value of 100 pounds of live hog in the Winnipeg market.

Producers moved in, perhaps stimulated in part by this high figure, and from 1939 to 1944 production increased steadily. The hog-barley ratio moved in the opposite direction with the same persistence. The ratio touched bottom at 18.1 in 1945 and then moved up, averaging 18.7 in 1946, 18.2 in 1947, 20.5 in 1948 and 19.5 in 1949. In 1950 the barley equivalent dropped sharply to 16.7. During this six-year period, average monthly marketing varied between a low of 342,000 and a high of 371,000, roughly half the 1944 figure.

During the first six months of 1951, the hog-barley ratio rose steadily, except for a small decline in April, and reached 26.1 in July, the highest point since September, 1940. The recent sharp drop in hog prices checked the rise, dropping the ratio to 18.4 on October 1, compared to an average of 25.1 for August. A. M. Shaw, Director, Marketing Service, Canada Department of Agricul-

ture, speaking at the advanced registry swine show and sale recently held in Saskatoon, predicted some further softening of hog prices.

Laurence Stone, Madden, Alberta, has recently indicated his confidence in the ability of hogs to earn money for producers. Last year he completed a piggery 318 by 36 by ten feet, complete with 60 pens, full basement, heating unit and radiant heating pipes, and a cement roof that will permit the addition of a second floor if conditions indicate that it might be profitable. This building as it now stands will house 900 market pigs. (See *The Country Guide*, March, 1951.)

Freeman Jordan of Portage la Prairie, Manitoba, has also found that hogs merit some attention. A record from 1948 indicates that he kept 12 to 15 sows, took two litters a year from each sow, and in 1946 showed a profit of \$14.74 per pig sold; in 1947 the profit per pig was \$12.13. He buys mixed feeds for his pigs and feeds none of his own grain.

SIZE of litter is one very important reason why the specialized hog producer can often make money, when the farmer with an odd litter running around the farmyard finds pig raising unprofitable.

Research workers in Oklahoma have concluded that it takes the first five pigs sold from each litter to offset the cost of labor and the investment in sow

figure is closer to nine. He keeps around 260 sows and has the advantage, not only of numbers, but also gets those extra, marginal pigs that represent the profit in any hog enterprise.

Lesyk is a young man, but he is not new to the hog business. He used to look after a handful of hogs on his father's piece of land when the senior Lesyk was away working in the mines. Back in 1938 Bill came to the place where he now operates, on the north edge of Edmonton. He started in with four acres and ten sows. He found that he liked the pig business pretty well.

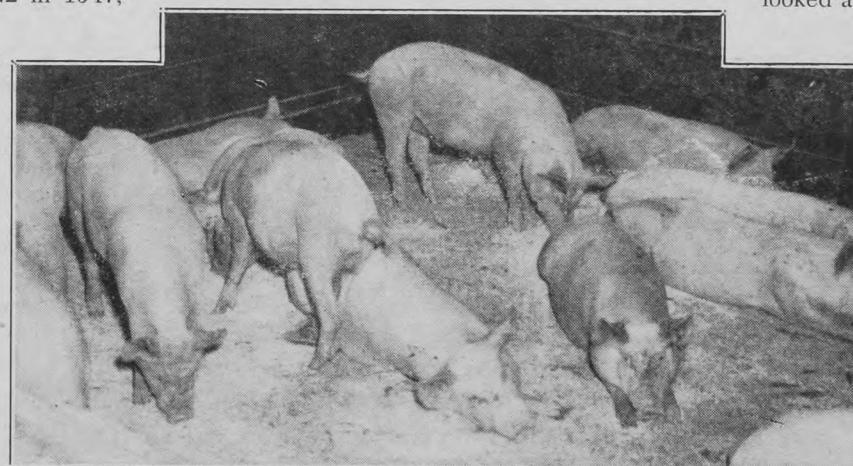
It was not very long before breeding pigs became small potatoes in the business, and he concentrated on buying feeders. During the war years he would buy anything that he could put his hands on, the only measure being that the pig must not be fat. He bought everything from weanlings to old, thin sows, and self-fed them outdoors. His building investment was low, and his turnover was both rapid and large.

The beginnings were small, but after a few years he was up to average marketings of about 400 pigs a month. His biggest year was 1945—he put no less than 7,000 pigs on the market in that year. Incidentally, he bought more pigs in the Lacombe area than in any other part of the province. In that central spot he could get the quantity and the quality that he desired.

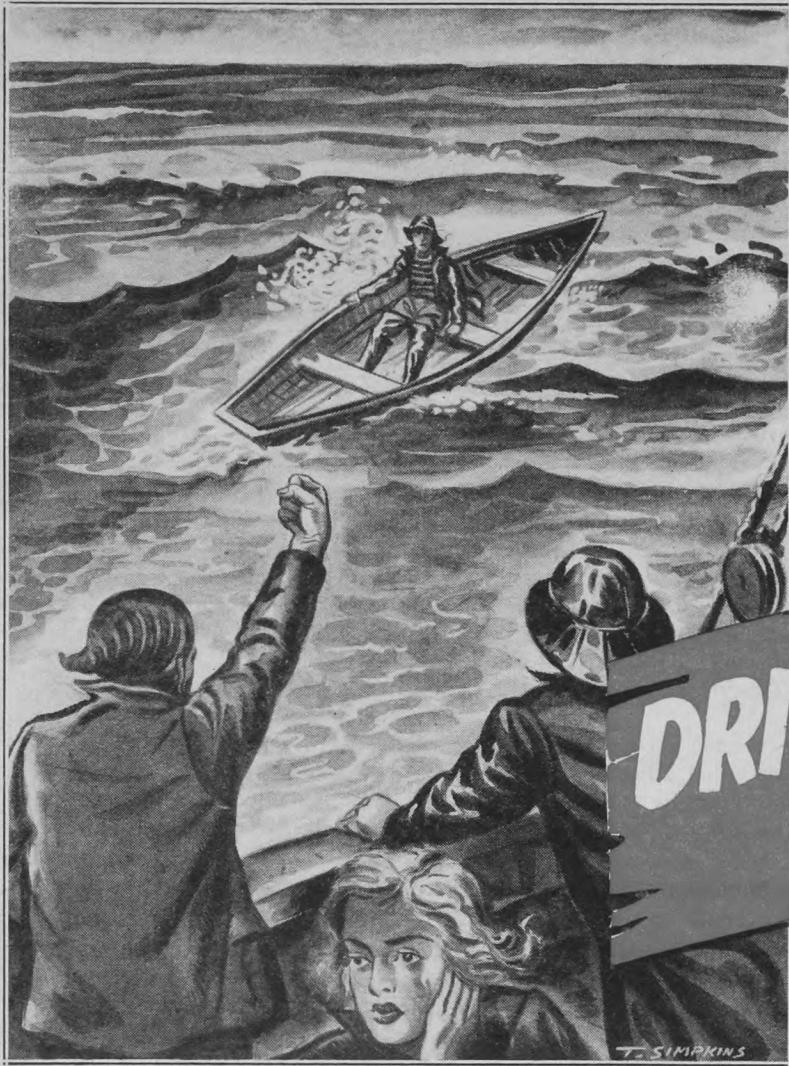
Lesyk began to shift back to breeding when it looked as though the British contract might be lost.

He felt that there might not be an assured market, and that if prices dropped suddenly and sharply, his losses might be enough to put him out of business. Also, he saw production beginning to fall and was afraid that he might not be able to buy pigs easily and would be put out of production for this reason. These factors convinced him that it would be the part of wisdom to go back into breeding his own pigs. Also, he was satisfied that he could raise weanlings for much less money than he had to pay for them.

The original ten sows and four acres have grown into 260 or more sows and (Please turn to page 20)



. . . And this pen illustrates that quality is stressed.



There were unforgettable memories that sombre evening and Stevenson looked as if he knew he was going to certain death.

THE spring snow was slushy, and our dog teams heavy-footed from a long day; but Oponi, the Yellow Knife guide, had said that the chinook coming down the valley smelled of smoke—lodge smoke. There were several reasons why I wanted to find the Indian camp, if one was near us. Primitive I knew they would be, in the headwater hills of that arctic river; but I knew our food was low, and we needed dogs to replace those which had run away into the woods. So, in spite of good-humored growling from the two Mackenzie Crees, we trekked on down the river spruce-belt through April evening gloom.

Oponi's bottle-nose was as good as a dog's. We had gone two miles, and it was deep dark before we caught glimpses of lodge fires ahead of us. The camp was a big one, we saw as we came near; at least two dozen teepees and many times that number of people. They received us courteously, as we strode into the circle of light—a circumstance which put my Indians at better ease, for the coast tribes were in bad repute.

They were Hares, I saw at a glance; but that particular tribe had never been catalogued and pigeon-holed by any handbook I had ever seen. They spoke a Tinneh dialect which we understood easily enough. The teams were quickly unhitched and fed, my men taken to lodges, and our outfits secured against their dogs. I was led to the teepee of the chief.

He rose to his feet, a tall, lean individual, as we entered. His face was in shadow then. While the one who had brought me explained our coming in brief and respectful language, I glanced about the teepee, noting its neatness and wilderness luxury—its fur rugs, carved weapons, and feather robes. At a sign, my guide left us alone. The chief waved me to sit. We faced each other over the fire.

My host was painted. Ochre and specular iron hid all his features except his eyes; and they were a dull, warm brown. I found myself staring straight into them. A silent minute passed. I tried to look away, but it was flatly impossible. They held me in a strange spell. A quiver jiggled up and down my backbone. I tried to analyze the cause, to discover what it was in those eyes which stirred me to my shoelaces. It wasn't fear on my part; it wasn't mesmeric influence on his, for they were ordinary

warm, brown eyes. I laid it to my tired nerves, and waited for him to speak.

"You will eat and sleep in my lodge, stranger," he said at length in the dialect. "You have come far, and are weary."

His words and his utterances had a friendliness to match his eyes. At least I would have sworn it so. Yet it seemed to me that outwardly he tried to appear cold and aloof.

While my food was being brought—a smoking joint of fresh caribou, marsh-fern bulbs and tart berry mash—I spoke to him about the packing dogs we needed, and supplies that would take us across the mountains

what put the idea into my head? Tired nerves? Maybe.

"My words meant nothing," I said coldly.

"But they were spoken for my ears," the chief objected, and waited for an answer.

"I thought you were a man that you are not," I explained lamely.

"How is that? Were not your words the words that one white man speaks to another?"

"They were. This other was a white man."

"How is that? How can a white man so resemble me? I have seen them, many of them, many years since, when the great canoes followed the whales in the coast waters. Yet never have I seen one that wore my clothes or spoke my language."

"If you have seen the ships that chased the whales, you will follow my words with understanding. When that warrior—" I pointed through the tentflap to a young buck of 23—"when he was a papoose I was chasing whales on one of those great canoes. There was a headman who gave commands to all of us. His name was Jodrell. There were three smaller chiefs, and I was one of them. There were five-and-thirty men. One of them was the man who—who made me address you with white words."

The chief nodded interestedly. He refilled his pipe and puffed expectantly. The way he took to that stemmo—

"This man Stevenson was tall, as you are tall; and slender, as you are slender. Before he came with us on this ship he had been a wanderer among the many tribes of white men. He followed no single work, as other men do. He was like a leaf drifting with the current. Wherefore he was called the Drifter.

"He was brought on the ship, out of a white man's city, when he did not know his right hand from his left. Headman Jodrell had need of another man to work. He had a temper like a surly spring silver-tip; so that his men deserted him just when the ship was ready to come up into these waters. So few were his men that his daughter went with us to see that we were fed as men who work hard should be.

"But man Stevenson would not work. He would not lend a hand to the ropes and white wings that carried the ship along. He would not wash the floor of the ship with water and a stone. When the smaller canoes were lifted down upon the waves and dashed away after a whale, he would not lean against his paddle. When a whale carcass was tied to the ship, he would not help cut out the bone with which you foot your komatiks.

"He said he had been brought on the ship against his will because a man had put powder in his conversation water; but against his will he would not work. He was whipped across his bare back with thongs. For a week he went without food. For another week, he was tied to a stump in the center of the ship. But he kept his word and did no work. His mind was as hard even as the mind of headman Jodrell.

"**A**FTER we were many days on the water, the headman's arm grew tired of lashing man Stevenson's back, and his tongue grew tired of calling him evil names and spitting upon him. The five-and-thirty men and the two smaller chiefs were at one mind with headman Jodrell; they hated the one who would do no work. They thought the man Stevenson was lazy. They did not understand why a man would not lend his hand to work when that was easier than receiving a lashing or going without food or being tied to a stump. They did not understand that his honor kept him from working. Not one of them spoke to him in kindness. He grew to hate them all.

"In the middle of the Moon of the Leaf, four men and a smaller chief went in a little boat to the mouth of Kok-Kanayuk to shoot birds for food, while the ship stood (Please turn to page 29)

As we sat before a fire and I recounted a strange tale to the chief of a remote arctic Indian tribe, I knew it was a lie that you can read a man's thoughts through his eyes

MACKENZIE VALLEY

--Highway or Byway?

An account of a September journey into the great and important Mackenzie Valley, which will be the dominant feature in the future development of the Far North

by R. J. HILTON



Top right: A heavy yielding field of Warba potatoes on the farm of Jack Browning, 200 miles down the Mackenzie from the Lower Hay. Lower left: Ripe tomatoes at the Fort Simpson Experimental Station. Bottom center: The 45-foot power boat owned by the Fort Simpson Experiment Station. Lower right: Good land on the Trout River delta with ripe oats and tomatoes.

THE beautiful northern lights played a battery of yellowed searchlights overhead, flickering and bickering. A slight rustle near my head was followed by a shout from one of my companions, and I looked up in time to see the fleeting outline of a fox, leaping over our three sleeping bags, to disappear along the banks of the Hay River. Later, as we broke our very simple camp in the first light of an early September dawn, my companions each found their shoelaces chewed to frayed remnants, and a packet of cigarettes that had been placed carefully on the grass at the head of the "bed" was scattered about, the precious contents very much the worse for wear. Apparently, we decided, northern fox pups are particularly partial to shoelaces and tobacco! At any rate, for the rest of the trip, my example of using my shoes as a pillow was carefully followed by my two travelling friends.

Imagine yourself en route for the storied Mackenzie Valley, for the romantic North Country, with two good companions. P. D. McCalla, supervisor of horticulture, Alberta Department of Agriculture, J. Y. Marritt, Plant Protection Division, Canada Department of Agriculture, and the writer, were fortunate enough to have ideal weather for our trip, and early September is perhaps the loveliest time of year in the North. Mosquitoes are almost over, blackflies have gone, and even the ubiquitous sandfly is only an easily smudged shadow of his former nuisance value. And the colors! Those who insist that autumn color brilliance is solely the prerogative of eastern provinces should have passed down the cutbanks into the Peace River Valley with us, viewed the Alexandra Falls in its red-and-yellow leaf-frame along the lower Hay River, and travelled the Mackenzie by boat and 'plane, to see the color galaxy from all perspectives.

AFTER that "foxy" first night, we continued our drive along the excellent Mackenzie Highway and were shortly entering the new town of Lower Hay River. This four-year-old metropolis on the shores of Great Slave Lake lies on the west bank of the main Hay River channel, while the old Hay River Post is on the opposite bank. Here we found many very nice new homes, much activity in shipyards and fish-packing plants, an excellent hotel . . . and, from our horticulturally biased outlook, very little interest in surroundings outside the buildings. True, one or two enterprising market gardeners have taken advantage of the good-looking alluvial

soil, the market and the long-day growing season, to produce small plots of very good vegetable produce; but lawns and shrubs and flower plantings were rare, in spite of the favorable soil conditions, and the frost-mitigating influence of the nearby lake.

By prearrangement, we were met at Lower Hay by John Gilbey, superintendent of Canada's most northerly experimental station at Fort Simpson. He had come up the Mackenzie with his roomy river boat, his foreman Johnny Goodall and pilot Julian Hardisty. Gilbey himself, combining duties as a territorial magistrate with his agricultural work, had to leave by plane for a court hearing at Fort Liard, but the rest of us embarked that afternoon from a Lower Hay dock, under cloudless skies and on a calm lake surface. The dual-motored river boat made good time across the western part of Great Slave Lake, and by dead reckoning, the Slavey Indian pilot brought us directly to the buoy and markers that signified the correct channel by Big Island and on into Beaver Lake.

We made a short night tie-up at deserted Wrigley Harbor, and were interested in noting the few remaining signs of occupation by U.S. Negro troops during the war. A large detachment was stationed on Wrigley Island to stevedore barge loads of equipment en route down river to the Canol Project; and in their spare time they reduced boredom by bulldozing aimless roads and clearings around the island. The topography of the island was gently undulating and the bush-grown piles of topsoil left by the 'dozer seemed to be loamy and productive.

By 4:30 a.m. we were on our way downriver, with the first habitation sighted at the lower end of weedy Mill Lake, after a run through countless thousands of ducks and geese, feeding up for their long flight south. Mill Lake Post has the usual Signal Corps Station, and previously was a thriving shipyard for the Yellowknife Transportation Company. A Hudson's Bay Post, airport and a few scattered dwellings appeared on an exposed point as we swept by and into the narrow, swift river proper.

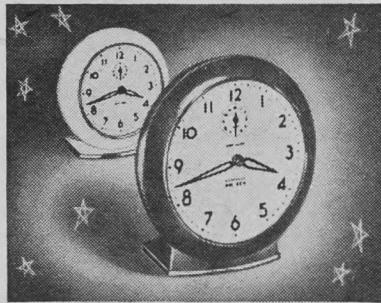
The run to Fort Providence was fast, and that bleak, windswept old fort on the high river bank somehow seemed to represent all the hardship and fortitude of the early North, when "the Bay" and the religious mission schools and hospitals were the sole contact between the "outside" and the dwindling native population.

A stop was made in late afternoon at Jack Browning's farm, near the Trout River Delta, some

60 miles upriver from Fort Simpson and 200 miles west and north of Lower Hay. Mr. Browning, born and brought up in Utah, came into the North as a woodcutter for the early steam-driven river boats. For some 20 years he has been farming a riverbank acreage at his home and about 90 acres of cleared land and delta pasture two miles downriver, where the turbulent Trout River has built up alluvial land that is light, easily worked, and which grows alfalfa, coarse grains, potatoes and root crops that would excite the envy of many prairie farmers. Mr. Browning and his seven sons plan to continue their land-clearing program, to expand both coarse vegetable and livestock production. In time, too, they visualize a scow-traffic delivery system extending to Aklavik. I cite this farming venture, in particular, to indicate that basic agricultural production can be maintained along the Mackenzie as a business proposition and a way of life, despite some opposition from well-established transportation outfits and the handicap of a small and scattered population.

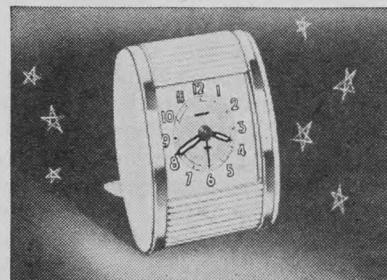
AFTER a comfortable night under the stars at a transient Indian camping ground, where we were quickly lulled to sleep by the gleeful splashings of playing muskrats, and the inevitable curtain-drawing of the aurora, we ran on downriver to Fort Simpson by mid-morning of the next day. Here is the most attractive and most pleasantly situated post along the Upper Mackenzie. On a delta island where the muddy Liard enters the Mackenzie, the Fort occupies a commanding position at a juncture of important water "highways." Anglican and Roman Catholic Missions are up to date and rather striking in architecture. The R.C.M.P. barracks, as well as the trading posts and most homes in the community, are painted and tidy. Hedges, tree shelters and attractive gardens are common, much of which may be due to the example set by Mr. and Mrs. Gilbey, who have transformed a rolling cleared area on the edge of the town into a horticultural display center in five short years. The Experimental Station buildings are all of logs, locally cut and squared three sides, with the bark removed from the outside face. They are stained a light amber-brown; and with good lawns and plenty of flowers, they present a challenge to others at the post, a challenge that is not being overlooked.

To our surprise, we found the Station tomato plots standing red with fruit, many plots being late varieties
(Please turn to page 28)

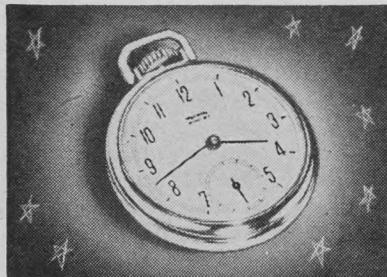


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Oil Bug Hits B.C.

Discovery in the Peace River block loosens speculation at coast as to eventual developments

by CHAS. L. SHAW

BRITISH COLUMBIA is enchanted with the prospect of becoming an important oil producing province. When the Pacific Petroleum well struck a high grade showing in the Fort St. John area of the Peace River country, the coast's newspapers heralded the discovery as marking another dawn of another era in industrial expansion. Members of the provincial government rushed to the radio to declare that now was the time to build that pipeline to serve Alberta and the coast and connecting, of course, with the promising new fields of the Peace River valley.

It's still too early to give a full appraisal of what the oil strike means. As some cautious geologists have pointed out, the well might have penetrated only an isolated pocket. On the other hand, the indications in the Peace River country have been regarded for years as extremely favorable, and the more optimistic are inclined to wonder not at the apparent excellence of this discovery well but at the fact that oil in commercial quantities was not located earlier in British Columbia.

More than a decade ago when ex-Premier T. D. Pattullo was jousting with the oil companies over prices and regulation and the companies threatened to shut down their operations if the government wasn't more reasonable Mr. Pattullo cockily remarked that he didn't care what the companies did; the time was coming when the government would be in the oil business itself, producing at its own wells.

Well, the oil companies reluctantly came to terms and Mr. Pattullo never did get very far into the oil business because, while the government's drilling crews labored at Commotion Creek in the Peace River country month after month they never did strike even a stain of oil and the well was abandoned as a dry hole.

Mr. Pattullo's highly publicized misadventure in the Peace River served to make many people skeptical of that area's promise as an oil producing region. However, to practical oil men

the area was never lightly discounted. It probably would have had far more attention from them had it not been for the more obvious possibilities of Leduc and other fields to the east. But this does not detract from the importance of this recent discovery on B.C.'s side of the border; it seems pretty certain that it's now only a question of time before B.C. shares some of the oil spotlight with Alberta and that there will be plenty of oil for the pipeline whenever it's built. The incident has also given Mr. Pattullo an opportunity of saying rather belatedly: "I told you so."

Oil refineries in the Vancouver area are preparing for expansion on a large scale, indicating that they subscribe to the idea that the pipelines are coming. B.C. alone consumes more than 40,000 barrels of petroleum daily, and adjacent sections of the Pacific Northwest, which would form a natural marketing sphere, consume another 250,000 to 300,000 barrels daily. A 24-inch pipeline such as is being discussed would have an ultimate capacity of 200,000 barrels of crude a day, so that it could very handily take care of a large proportion of the whole region's requirements.

Of course, pipelines to the coast were being considered long before the Peace River development; in fact, they are likely to materialize within a few months regardless of how the Peace River field blooms. But the new strike has provided additional support for the pipeline as well as heartened B.C. business interests generally. It has also sparked the enthusiasm of the government, which no doubt envisions a happy day when oil royalties may provide a source of revenue comparable with those of oil-rich Alberta. Added to the revenues from British Columbia's other diversified industry, oil would certainly be a tremendous force in lifting the west coast's economy to even higher levels.

The recent merger of the H. R. MacMillan and Bloedel interests in the forest industry is an indication of the magnitude of the province's expan-



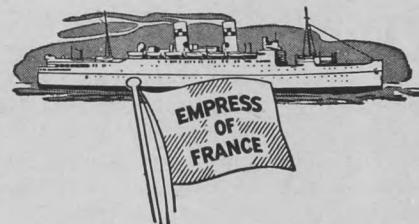
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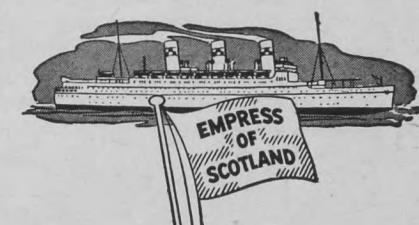
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sion in another field. The combined assets of these companies are more than \$100 million, which makes the new corporation the second biggest fully integrated wood-using enterprise in the world, the giant Weyerhaeuser group in the U.S. being at the top. International Paper Co. and Abitibi control greater assets, but these companies, while huge producers of pulp and paper, lack the diversification of the MacMillan-Bloedel setup with its lumber and plywood and shingles as well as cellulose products.

This MacMillan-Bloedel organization now ranks second in the province only to the mammoth Consolidated Mining and Smelting Co., with B.C. Electric probably coming third, and in keeping with the general trend of things both these latter companies are currently engaged in large-scale expansion, with Consolidated going ahead with a \$30 million hydro-electric expansion of the Pend Oreille River which may have a chain reaction throughout that southeastern part of the province by encouraging new industries, requiring cheap and abundant power. Then, of course, there is the spectacular construction program of Aluminum Co. of Canada at Keno and Kitimat, which at present involves an authorized expenditure of more than \$150 million and which is expected to lead ultimately to an investment of half a billion.

IN spite of all these wonderful happenings which seem to reflect a continuing prosperity for booming B.C., the government continues to lack popular support. The coalition is under almost constant fire, and the session of the legislature scheduled for February is certain to be an explosive one. From its deliberations may emerge a definite decision as to whether a provincial election will be called next year. The government does not need to go to the country until 1953, when its normal life would peter out, but there has been an insistent demand for a break in the coalition before then so that the separate parties may make their own appeal for support.

The parties are extremely active for a province that may not see an election for two years, and this leads to the natural assumption that the government has no intention of running its full course. At least two Conservative members of the coalition are busily campaigning already, the Young Liberals are urging the coalition to quit and prepare the way for a new deal for the Liberals, the C.C.F. is spoiling for the fray whenever the battle lines are drawn and the Social Credit party for the first time announces that it will have candidates in every B.C. riding.

Conservationists appear to have lost the first round in their fight to save Strathcona Park from the power interests. B.C. Power Commission wants to dam Buttle Lake, a scenic asset in the heart of Vancouver Island, so as to provide more energy for expanding industry. The various groups who see red when natural beauty is threatened challenged the proposal, but the government's water rights commissioner has decided in favor of the power interests. The second round in the struggle will probably be waged in the legislature. The controversy underscores a contest that will be more and more widespread as industry west of the Rockies expands.



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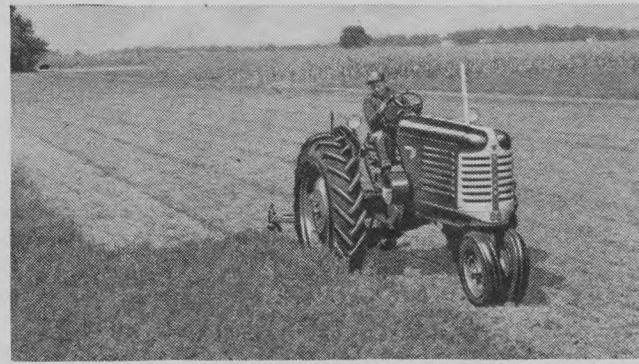
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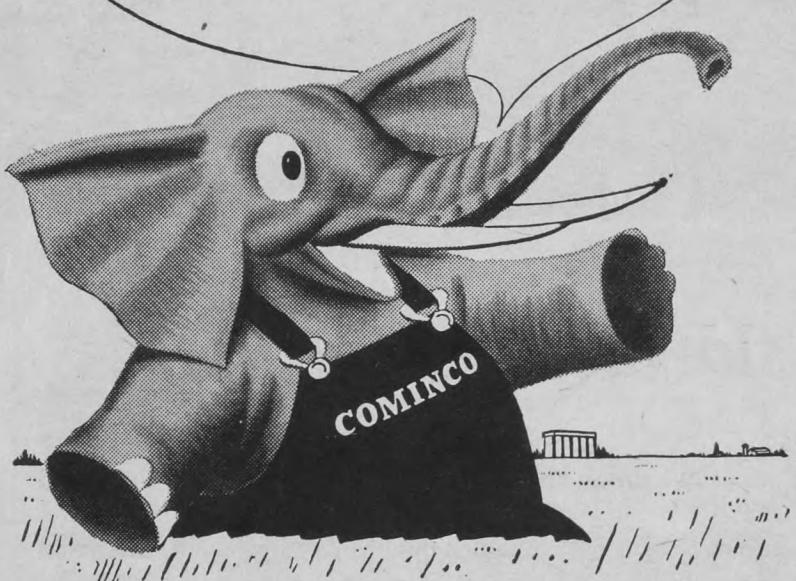
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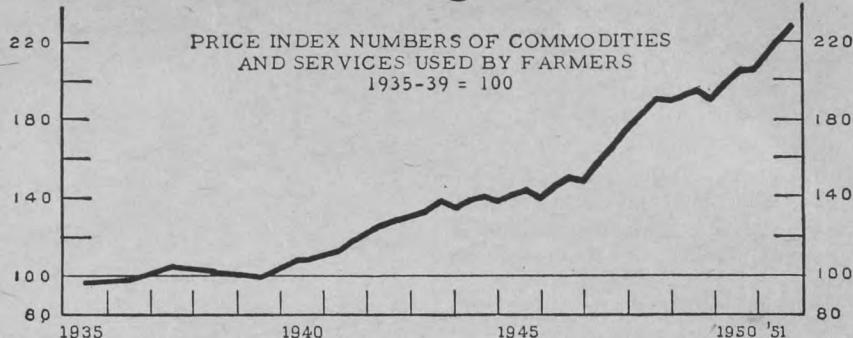
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News of Agriculture



This DBS graph not only shows clearly why the 1935-39 period has been chosen as the base period for price indexing, but illustrates clearly the steady rise in farm costs that has gone on since 1939.

Farm Costs Still Going Up

THE Dominion Bureau of Statistics, early in November, issued the price index numbers of commodities and services used by farmers, as of August, 1951. The basis of comparison is that period of 1935-39 equals 100. DBS uses 11 groups of commodities, in addition to farm family living costs, and publishes two composite indexes, one of which is inclusive and the other exclusive of farm family living costs. The indexes are compiled three times each year, as of April, August and December.

The 11 groups of costs having to do with farm operation include equipment and materials; taxes and interest rates; farm wage rates; farm machinery; building materials; gasoline, oil and grease; feed; fertilizer; binder twine; seed; and hardware. Farm family living costs include the following groups: food; clothing; fuel; household equipment; health maintenance; and miscellaneous.

Index numbers are published for all of Canada, and for eastern and western Canada separately. Farm family living costs, as well as tax and interest rates, farm wage rates, machinery, building materials, feed and hardware, are higher in western Canada than in eastern Canada. The index number for binder twine is the same in both parts of the country. Index numbers for equipment and materials, gasoline, oil and grease, and for fertilizer, and for seed, are higher in eastern Canada.

Throughout this reference, the figure in brackets is the index number for the year 1939, where the five-year period 1935-39 equals 100. The composite index number for all farm operating costs for August was 233.4 (99.3); for farm family living costs, 116.6 (99.5); and for all farm costs including living costs, 226.7 (99.4). Greatest increases in costs were in the following groups: farm wage rates, 479.7 (109.9); binder twine, 364.6 (93.8); building materials, 330.6 (108.1); feed, 237.9 (78.7); seed, 220.5 (76.9); farm family living costs, 216.6 (99.5).

Among the items making up farm family living costs, greatest increases have occurred in clothing, 257.6 (101.1); food, 247.4 (95.7); and household equipment, 241.8 (101.2). The smallest increases in farm operating costs have been in gasoline, oil and grease, 138.2 (93.9); tax and interest rates, 155.4 (102.7); fertilizer, 161.8 (101.3); and miscellaneous living costs, 121.5 (100.5).

Problems of Land Tenure

NOT so much is heard now in western Canada about absentee

ownership or absentee landlordism, but time was, in the early days of settlement, when absentee ownership of land and absentee landlords provided quite a cross for the prairie farmer to bear. Nor do we hear so much about high interest rates paid by farmers. Interest rates of eight and nine per cent were common once.

Today, problems having to do with land tenure are likely to be confined to matters of detail between landlord and tenant, or perhaps with the burden of taxation. We are better off even than in the southern states where there is a large group of "share croppers" who, largely because of a one-crop system either of cotton or tobacco, may be largely in the hands of owners from whom they can sometimes expect little mercy.

In other parts of the world, and more particularly in the underdeveloped countries, of which there are a great many, the system of land tenure presents a problem of basic importance. The solution of this problem, in many cases, will underly all efforts to improve the efficiency of agriculture in those countries and make them more self-sufficient in food production.

Because of the importance of land tenure, there was concluded last month at the University of Wisconsin a five-week conference on this subject, organized in co-operation with the Food and Agriculture Organization of the United Nations. About 70 delegates representing nearly 40 countries were in attendance. As put by one delegate, from Pakistan, when speaking of the value of the conference: "Its main value is that it will afford an opportunity for free discussion of fundamental issues. That is bound to lead to a better understanding of land problems by each country, in relation to the world. Even if the conference only makes the various participants realize the importance of the land tenure problems and sets them thinking how their own country could find a solution, it would have eminently justified itself."

Farm Machinery Prices

A GREAT many farmers in western Canada have invested heavily in farm machinery of one kind or another during the past five or six years. In 1950, Canadian farmers paid out approximately \$300 million for farm machinery and equipment, including repair parts. Prices of farm machinery, like the prices of everything else, have gone up, and between January of 1949 and August of 1950, the index number of farm machinery prices has risen from 158.1 to 190.2, based on 1935-39 equals 100.

U.S. farmers have also been buying

very large amounts of machinery and equipment. Six of the larger companies and 23 of the smaller ones have recently submitted data on their operating costs and profits for the 1946-50 period, at the request of the U.S. Senate Committee on Agriculture and Forestry.

The six large companies combined had about \$860 million in sales in 1946. Since then, sales have jumped remarkably until in 1948 and including 1949 and 1950, sales each year have been substantially more than double the sales of 1946. Labor and cost of materials together make up from 65 to 75 cents out of each dollar received from sales; miscellaneous expenses from 15 to 20 per cent; taxes from two to seven per cent; and dividends and surplus combined from five to a little more than eight per cent.

Despite the general rise in costs, which has been so rapid in recent years, labor and materials each took less of the sales dollar in 1950 than in 1946, or in any of the years 1946-49 inclusive. This was partly due to the very large volume of sales, and partly to price increases. The over-all result has been very favorable to the companies, because net income after taxes, shown as a percentage of net worth, has varied in the five-year period from five per cent in 1946 to nine per cent in 1947, 12 per cent in 1948, and 13 per cent in each of the years 1949 and 1950. In this respect,

the 23 smaller farm machinery companies have averaged even better than this, probably because they operated to a proportionately greater extent on borrowed capital. In any case, they had 16 per cent of their net worth as net income in 1946, 20 per cent in 1947, 22 per cent in 1948, 13 per cent in 1949, and 14 per cent in 1950.

Alberta Farm Family Awards

ON November 15, Alberta's Minister of Agriculture, the Hon. D. A. Ure, announced the third group of Master Farm Family awards. The winners were the families of the following: John G. Porozni, Willingdon; J. W. Hosford, South Edmonton; Floyd Gillyson, La Glace; and Victor Watson, Airdrie.

Candidates must be Canadian citizens who have operated farms in Alberta for 20 consecutive years. They must be nominated by at least three neighbors, and must personally have accepted the nomination. Thirty-six nominees were eligible for consideration this year, and selections are made on a district and regional basis, with final confirmation by a provincial committee. Technical and practical agriculturists, as well as home economists, are represented on all committees, which evaluate 87 factors relating to the farm, cultural practices, family and community life. "The slogans of the Master Farm Family," said Mr. Ure, "are good farming, right living and clear thinking."

Get It at a Glance

Current facts about the farm and farmers, from here and there

AS of October 31, the Alberta Department of Agriculture estimated that only 174,111,000 bushels of wheat, oats and barley had been threshed from an estimated total crop of these grains amounting to 407,346,000 bushels.

NEARLY all fruit crops in British Columbia were smaller in 1951 than in 1950, or, on the average, from 1940 to 1949. The pear crop was an exception; apricots and grapes were more plentiful than in 1950, but below the 1940-49 average.

IN 1950, U.S. farmers had as net income 38.6 cents out of every dollar they took in. This was the lowest figure since 1933.

CANADIAN milk production increased steadily from 10.6 billion pounds in 1920 to 17.5 billion pounds in 1942. From 1942 to 1945 production levelled off, and since 1945 production has shown a slight decline. Central Canada accounts for about 62 per cent of Canadian milk production; the prairie provinces for about 28 per cent; and the Maritime provinces and British Columbia together, for about ten per cent.

THE United States is presently subsidizing wheat under the International Wheat Agreement, by from 57 to 59 cents per bushel, depending on the port of export.

THE Manitoba Government reported that agricultural officials in the province had to search as far back as 1900 to find harvesting conditions as unfavorable as they have been during the present season.

CANADA'S 1951 honey crop is estimated to average 92 pounds per colony and to have reached an over-all total of 38,748,000 pounds, despite 3,400 fewer beekeepers and 9,000 fewer colonies. At 119 pounds per colony, Alberta led all other provinces in yield this year. In 1950, Manitoba led, with 131 pounds, but dropped to 110 pounds this year.

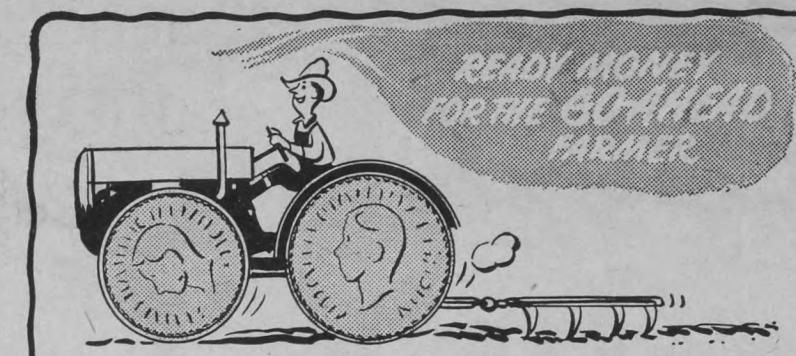
IN September, 1951, Canada had 1.7 million fewer hens, than in September of 1950. Nevertheless, they produced six million dozen more eggs.

HOW many eggs do all of the farm families in Canada eat in one month? In September, 1951, the answer was 4,505,000 dozen, worth \$2,524,000.

IN Scotland, the breed of sheep which outnumbers all other sheep by three-to-one, is the Scottish Blackface. Despite the fact that a Blackface lamb sold not long ago for £2,300, a record price for the breed, Scottish Blackface sheep have no pedigrees and there is no flock book for recording the pedigrees of individual animals of pure breeding.

WORLD wheat production in 1951-52 is estimated at 6.65 billion bushels, of which North America will provide 1.6 billion bushels.

A ROUND 17 per cent of the total cash income of Canadian farmers comes from the sale of dairy products. These stand next to livestock and wheat, and represent about twice the income from farm sales of poultry and eggs, and nearly four times the sale value of fruits and vegetables.



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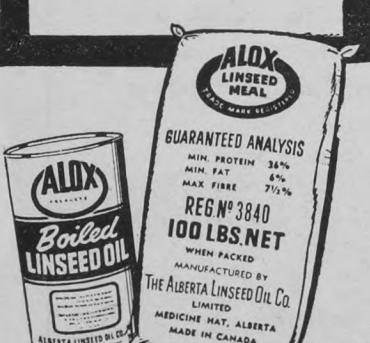
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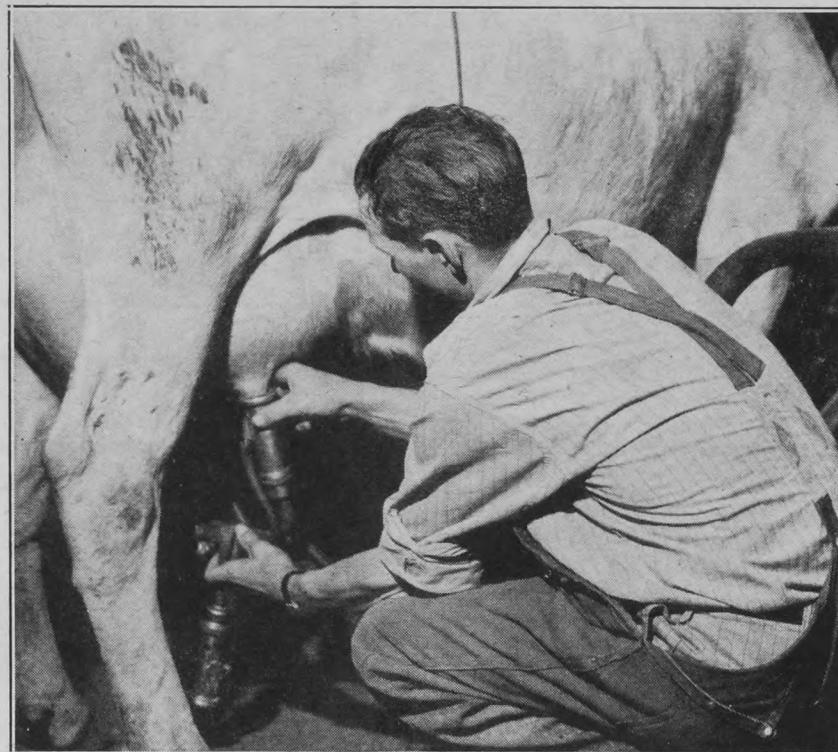
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[National Film Board Photo]

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A Way to Save a Quarter

DR. W. E. PETERSEN of the University of Minnesota was the first to investigate thoroughly, discover, and popularize, not only what may be called the mechanics of milk secretion, but also something about cow psychology in relation to the production of milk. Dr. Petersen's renown is world-wide. He has been several times in Canada, and has also visited Australia, New Zealand and Britain.

Following his visit to Britain, a British dairy herd manager evolved a method of saving damaged quarters, based on the information provided by Dr. Petersen. Thinking about the severe teat injuries that block the opening, which he believed must be cause for many cases of mastitis and of a great deal of loss to dairymen, he got a veterinarian to amputate the end of the teat above the injury, so that there would be absolutely no obstruction to the flow of milk. Writing in the Farmer and Stock-Breeder some time ago, he reported having had four cows so treated. One of these, a Holstein-Shorthorn cross, gave 9,121 pounds with her second calf, was operated on in the third week of her third lactation, and gave 9,110 pounds for the lactation. With her fourth calf, she gave 9,278 pounds, and at the time of this report was giving 58 pounds daily.

One of the four cows so treated had both hind quarters done. Two of the four produced 2,000 gallons with the fourth calf. None of the cows, he reported, loses any milk at all.

This dairymen said that the procedure immediately following the amputation is very important. The cut teat, he says, takes exactly three weeks to heal enough for a teat cup to be put on it. In the meantime, treat the cow exactly as before except that her udder must not be washed or handled until she is to be milked. "It is exactly 50 seconds after the washing that the milk is released and flows from the teat. For the three weeks' healing period, this milk must be run onto the ground or into a pail. This

is the only small disadvantage of the whole business, with machine milking. . . . After each milking during these three weeks, a small jar of disinfectant should be held over the teat for a few seconds, as a safeguard against flies, etc."

Pig Litter Record

A RECORD for raising baby pigs is thought to have been established by a farmer in Austin, Minnesota. In 1941, a record of 720 pounds litter-weight at 56 days of age was established by a Poland-China sow with a 12-pig litter. The Minnesota farmer, Wayne Hotson, had a registered Chester white sow which produced a litter of 12 pigs weighing a total of 812 pounds at 56 days of age.

The owner says he began feeding them aureomycin feed supplement when they were a few days old, by holding their mouths open and pouring in half-a-teaspoonful. When they were a week old, he put sod in the farrowing house and spread the antibiotic on the sod. At two weeks, he began feeding them rolled oats along with the aureomycin supplement, later switching to hulled oats, all the time supplementing the sow's milk with cow's milk. At eight weeks of age, they averaged slightly more than 67 pounds.

Artificial Rumen

THE rumen of cattle is a large fermentation vat, in which the large quantities of roughage eaten by cattle are broken down by the action of the intestinal juices and the bacteria and enzymes to be found in quantity in the rumen. Putting it another way, the feeding value of roughages, hay and other feeds consumed by cattle depends to a considerable extent on the fermentation caused by bacteria in the rumen or fore-stomach of these animals.

An Ohio research project dealing with the study of these fermentation processes and, indeed, with all other attempts to study them, have been hampered due to the difficulty of measuring the chemical changes which take place in feeds within the

stomach. Even if cattle were subjected to surgery, and a permanent opening into the rumen made in the animal's flank, this still remained true to a considerable extent. At the Ohio Experiment Station, an artificial rumen has been evolved, which uses laboratory flasks and contents from a cow's stomach at body temperature, as a means of speeding up the determination of what changes fermentation brings about in cattle feeds. These changes include the digestion of fibrous material and the manufacture and improvement of vitamin and protein constituents in the feeds. The Ohio researchers think that their studies can lead to further improvement in cattle nutrition, and to better utilization of cattle feeds, especially poorer quality roughages.

The Calving Interval

THE Michigan State College of Agriculture has made a study of the calving and breeding records of the college dairy herds for periods of from 15 to 18 years.

A total of 1,860 normal calvings were studied ranging from 564 first calvings to one cow that calved for the 15th time. Heifers in the three herds were bred to calve at from 27 to 30 months of age. It was found that little variation in the length of calving interval could be associated with age, though the interval before the second calf was slightly longer than the intervals following. The average interval increased, says the report, after the ninth calving, though the number of cows that had ten or more calves was very small. If, up to ten years of age, there is any effect of age on the length of the calving interval, it probably would not show up in these herds, because they had been subjected to constant culling out of the difficult breeders.

Neither did the production of the previous lactation period seem to show any evident relationship to the breeding results of the following lactation. Generally speaking, there was a little longer time between time from calving to first service among high-producing cows than among the poorer cows, and the same thing seems to have been true of the time between first service and conception. Generally speaking, other investigations have not shown that high production is antagonistic to breeding efficiency.

Basic Thoughts

ABOUT two years ago, the Beaverlodge Experimental Station in Alberta made some timely remarks in the course of a station newsletter. Since then, beef cattle prices have reached an unprecedented peak, and hog prices recently have dropped sharply from record levels, but the kernel of what was said then is just as good now, and the following paragraphs will bear repeating:

"When grain prices were at the peak, very few farmers wanted to feed cattle and pigs. Money came easy, and chores interfered with bonspiels. A few admitted the need for forage crops in the farming program, but the seed crop looked after that. The popular way to farm was to drive the tractor and truck from April to October, and to move to town for the winter.

"It has been encouraging of late to find a genuine interest in livestock

among many who previously have grown only grain. They not only have a small herd coming along, but they have seen to it that the quality is right. Many are grade herds, with a nucleus of pedigree animals. For the most part, the owners are the younger set. These are graduates of calf clubs, or schools of agriculture, or are veterans who have a well-defined program of balanced agriculture.

"We know that it sometimes pays to follow the markets and pick up the easy money. However, agriculture is a long-term proposition, and the best returns are those that go with economic security and the maintenance of fertility. There are sound reasons for livestock of some kind on every farm in the wooded sections of western Canada, and those who think otherwise will eventually learn. Basically, farmers draw their revenue on the basis of the number of days' work. We can cite instances where the net revenue on balanced farming programs is double that of typical grain farms. This suggests half-section farms in the future, and a place for the thousands of European immigrants reported to be looking for homes in western Canada."

Famous Angus Cow

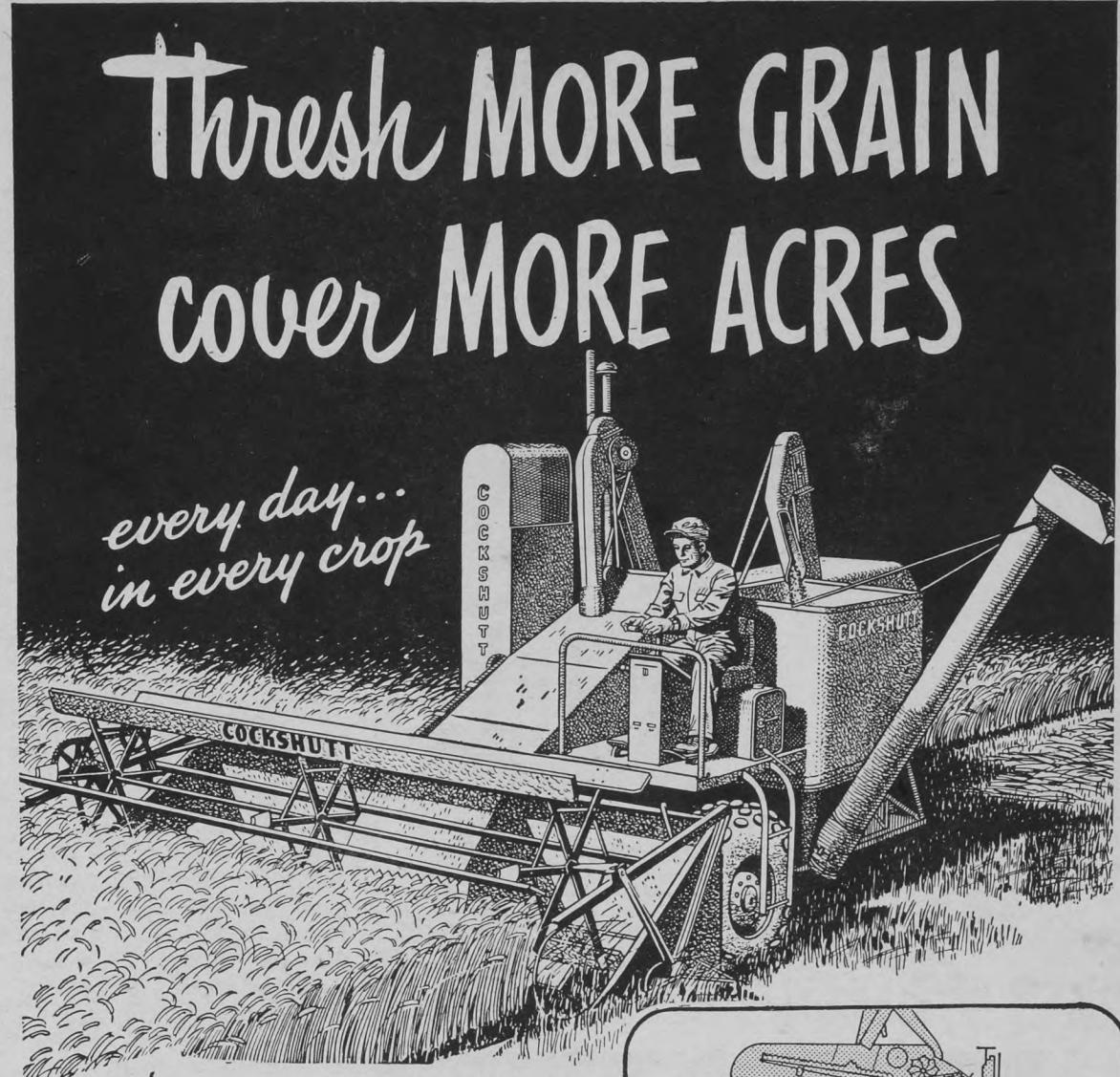
STILL fat and healthy, but becoming a little stiff when walking, Waltham of Akitio (imp. N.Z.), was born in November of 1926, and at 25 years of age, has to her credit 18 calves (10 heifers and 8 bulls), and progeny numbering 192 (97 bulls and 95 cows). She is owned by Milong Stud, Young, Australia, where four of her early calves are cows still breeding, and where the aged dam will be cared for as long as she lives. During her lifetime, she has been fed on the best of pasture, except during the drought of 1947, when she was fed with a sheaf of hay each day.

Legume Seed Screenings

THE Lethbridge Station reports the experiments at the Experimental Sheep Station, Scandia, in which screenings from alfalfa and clover seeds were compared with linseed oil for the feeding of lambs. For two successive years, one group of lambs was fed a ration consisting of non-legume hay, grain and linseed oil meal. A second group was fed a similar ration except that legume seed screenings were substituted for the linseed oil meal.

Both screenings and oil meal were fed at one-fifth pound per head daily during the first winter, and three-tenths pound per head daily during the second winter. During the first winter, the lambs on screenings made slightly better gains than those fed the linseed oil meal; but during the second winter the gains of the two groups were almost identical, thus leading to the conclusion that on the basis of these results legume seed screenings were equal in value to linseed oil meal as a feed for lambs.

The value of such screenings as feed for pigs is considered questionable. Moreover, the station emphasizes the fact that practically all screening contains active weed seeds, so that every precaution is advisable to prevent the spreading of such seed when transporting and feeding them.



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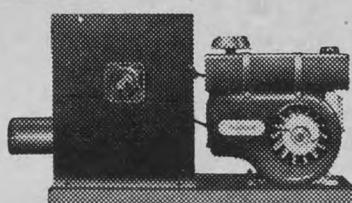
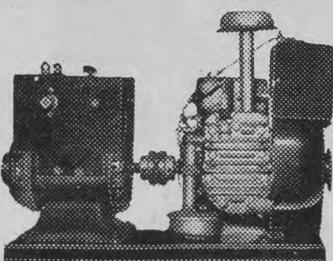
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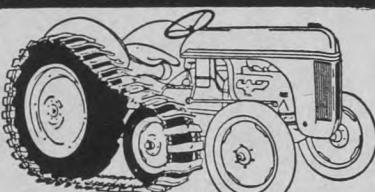
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[Intern. Harv. Co. photo.
Mechanization of corn harvesting, a 90-million-acre job in the U.S., saves costly man labor in a busy season.

Storing the Tractor

THE farmers of Manitoba, Saskatchewan and Alberta annually buy roughly two-thirds of all of the farm machinery and equipment purchased in Canada. This amount, including repair parts, last year totalled more than \$300 million, a record high figure. For Canada as a whole, more than one billion dollars is invested in Canadian farm implements and machinery, of which nearly \$600 million is invested by farmers in the three prairie provinces.

The focal point of a very large part of this huge investment today is the power unit—the tractor. Tractors, even more than machinery and equipment in general, are concentrated in the prairie provinces. Larger farms and larger implements also call for larger tractors, on the average.

All of this implies a need for good care of this very large investment in tractors. Depreciation of farm machinery, and especially of power units such as the combine and tractors, is costly. This is why C. A. Cheshire, Extension Agricultural Engineer, Alberta Department of Agriculture, recently emphasized the fact that care in preparing the farm tractor for winter storage will do much to prolong its life. Here are his specifications for proper preparation for tractor winter storage:

"The first thing is to clean the tractor thoroughly of all grease, dirt and dust. Next, drain the crankcase, flush and refill with clean oil, and operate the engine for a few minutes. Drain the radiator and flush the cooling system with a scale-removing solution. A solution for this purpose can either be purchased, or made at home with washing soda and soft water. If washing soda is used, add three pounds of washing soda to each seven gallons of water, and operate the tractor with the shutters on the radiator partially closed until the mixture steams. The solution is then drained from the radiator, and the whole system flushed out with clean, soft water. Leave the draincocks open.

"Next, remove the spark plugs and pour a cupful of oil into each cylinder, turn the engine over at least two revolutions by hand, and then replace the spark plugs. Give the tractor a complete and thorough grease job, and block the machine up to take the

weight off the tires. Store in a protective place, or at least cover the tires. Use rust-preventive grease or paint on any of the surfaces that have worn shiny.

"Drain all fuel from the tractor—this includes fuel tank, fuel lines, sediment bowl and carburetor. Cover the exhaust pipe and the breather tap to keep out rain, snow and possibly even birds. Be sure to remove the battery, after charging it fully, and store in a cool, dry place."

Alfalfa Seed Yields

SOME time ago, the University of Wisconsin reported a test with stands of alfalfa, laid out in parallel strips, to determine treatments which would increase seed yields. One strip got fertilizer, another fertilizer and boron (one of the trace minerals), and a third was untreated. Then a strip across all three parallel strips was dusted with about 40 pounds of five per cent DDT to the acre, during the late blossom stage of the second crop.

The researchers found that high level of soil fertility is important, but even high fertility doesn't help unless the insects are kept under control. No single treatment gave maximum yields of alfalfa seed, but on the plots which received all three treatments, fertilizers, boron and insecticide, the yields were from 40 to 77 per cent higher than on any other plots in the survey.

Sainfoin

THE Division of Forage Plants, Canada Department of Agriculture, Ottawa, has recently suggested that for some parts of Canada where alfalfa and clovers are severely damaged during the winter, sainfoin, a comparatively little-used forage crop, might have a place. It is a long-lived, deep-rooted perennial which tillers well and produces stout, erect stems from one to three feet high. Seed pods contain a single seed.

Sainfoin is not grown much in North America, but might prove useful as a legume where alfalfa will not survive the winters. Hay tests of 13 strains in 1949 gave an average seasonal yield from two cuttings, of 4,250 pounds per acre. Furthermore, a chemical analysis of comparable samples of hay from sainfoin, alfalfa and red clover, showed that these crops had 22, 29 and 30 per cent pro-

tein respectively, and that the crude fibre content of these hays tested 17, 22 and 12 per cent respectively.

It is further reported that in favorable seasons sainfoin produces a good yield of seed and is attractive to honeybees as a source of nectar. One half-acre block at Ottawa in 1950 yielded 291 pounds of seed, or approximately 600 pounds per acre. This was a higher yield than for alfalfa or red clover, but the seeds are unhulled and fairly large, which means a much higher seeding rate per acre. Ottawa authorities conclude that "tests of this legume in areas where alfalfa and clovers do not thrive may show that it is a useful substitute."

Seed Dormancy

NEARLY all seed will fail to germinate evenly or completely for some time after it is harvested. This is a period of dormancy which varies from a few weeks to perhaps a few months. Brome grass seed, tested shortly after harvest, will germinate very slowly. Creeping red fescue seed may not germinate suitably for commercial use in November, but may do so later. The Canada Department of Agriculture says that timothy and other grasses, clovers and even alfalfa, may germinate incompletely, while flax and small grains are likely to show varying degrees of dormancy.

It is pointed out that most of our common farm seeds are strongly dormant as they reach the mature point on the plant. They need exposure to warm, dry conditions, under which they can dry, shrink and go through the process of "after-ripening." This after-ripening breaks the dormant period, and not only improves the percentage of germination, but the quickness with which it will take place. The process of after-ripening will be slower in cool weather, and in damp or cold weather may stop altogether. This is the reason why the amount of dormancy which seed will show a comparatively short time after harvest, may depend on the kind of autumn weather prevailing.

We are told that late grain or grass seeds can carry strong dormancy until the following spring or later, if the crop has been cut on the green side. This is partly because immature seed is more dormant to begin with than mature seed, and partly because the seed cannot after-ripen rapidly in low autumn temperatures before the winter sets in.

This variability in dormancy is one of the reasons why it pays to make use of the seed testing laboratories, which have several methods by which they can obtain complete germination from dormant seed.

Fertilizers for Brome Grass

R. P. KNOWLES, Forage Crops Laboratory at Saskatoon, has recently reported that substantial increases in the yield of brome grass, both for seed and forage, may be obtained by the use of commercial fertilizers. Best results so far have been secured from high-nitrogen fertilizers, such as ammonium nitrate containing 33.5 per cent nitrogen, and ammonium sulphate which contains 21 per cent of nitrogen. Comparatively poor responses have been secured following the application of phosphorus in the form of phosphate fertilizers. "On the basis of nitrogen," he says, "ammonium nitrate is cheaper than ammonium

sulphate and has given more satisfactory results."

To secure satisfactory increase in yield, however, fairly heavy rates of application are necessary, and 125 pounds of ammonium nitrate is recommended. With this rate of application, seed yields have been increased by 100 pounds per acre, and forage yields of brome grass by one ton per acre where moisture conditions were good. "At a cost of about \$5.00 per acre for fertilizer alone," says Dr. Knowles, "this investment per acre is justified if there is good use for the hay or straw or when the seed sells at reasonable prices."

An important factor is the time for application. Fertilizers applied in August and September have increased seed yields more than when applied in October, or in early spring. This is less true than with yields of forage. Spring applications have given hay increases almost as large as those obtained from fall treatments, and in all cases the fertilizer was broadcast on the surface of the soil.

Moisture, however, is an important factor in the use of all fertilizers, which must be dissolved before they can be available to the roots of plants. Therefore, Dr. Knowles says that in the open prairie area of western Canada little response to fertilizers can be expected in dry years. The use of fertilizers should be restricted more or less to the low areas in the fields, or to years when there is good fall moisture. These restrictions do not apply as a rule to the Park Belt, where nitrogen fertilizers are likely to be profitable.

Weed Control in Crops

WHERE it is the custom to seed down pasture or hay crops with grain as a nurse crop, the control of weeds in the grain crop needs very careful consideration, especially in these days of chemical weed control. The chemical used, according to George Knowles, Central Experimental Farm, Ottawa, must control the weeds. Likewise, it should not harm the clover or grass, or reduce the yield of grain. Finally, of course, it must be economical and applicable with available equipment.

Mr. Knowles suggests that at the present time there are only three chemicals which offer some hope of controlling annual weeds in grain seeded down. These are calcium cyanamide dust, the dinitro compounds, commonly known by the trade names of Sinox and Dow's Selective, and 2,4-D. Of these, the easiest to apply is 2,4-D because it takes less water. The next best requires 80 gallons of water per acre.

Unfortunately, 2,4-D, though the cheapest and easiest to apply and also the chemical which controls the most weeds, may be fairly severe on clover. The amount of resistance as between clovers varies. The order of resistance is reported to be as follows: red clover, ladino, alsike, alfalfa, and sweet clover—the latter two being very sensitive. Clovers become more resistant as they advance in growth, but so do the weeds. However, experiments seem to indicate that there is less clover injury if the 2,4-D is applied when the grain is up about 14 inches and also when used on red clover, ladino or alsike at not more than four ounces per acre of the pure 2,4-D in the amine form, and three ounces of the esters.



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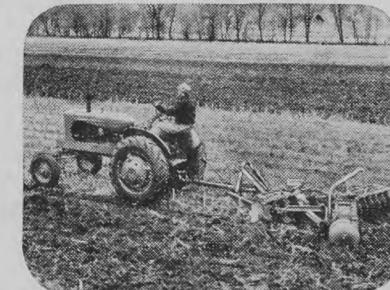
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Pigs Pay if:

Continued from page 9

400 acres. This much land is not required for the pigs, but he likes to grow alfalfa, which he grinds and feeds. Also, he and a brother have a partnership dairy herd of 30 cows, and they require pasture and feed. Some of the land is used for growing grains, though he buys 90 per cent of his hog feed.

HE saves gilts from the bigger, better litters for his breeding sows, and buys good, Yorkshire boars. "I never argue too much about the price of a boar," said Lesyk. "If you figure how much extra you get from a good one compared with a poor one, it is worth the money. Added to that, you get a good bit of the original investment back when you sell the aged boar." He field breeds, though he feels that if he could conveniently hand breed, he would get more catches.

Bred sows are run on pasture until about two weeks before they are due to farrow. The sows are then put into a farrowing pen, and the little pigs are creep-fed. They are given one of Lesyk's own mixtures, which includes five to six per cent alfalfa meal and is boosted with vitamin and protein supplement. The sows eat from a self-feeder, but there is a gate in front of the trough that is released for only three one-hour periods each day.

Weanling pigs are sorted by size in the fattening barn; the well-grown ones are run in one pen, and the runts are run together in another, with the medium fellows also grouped. All are fed grain rations until they reach about 130 pounds. At this time 20 per cent of cooked garbage is added to the ration, this ration being continued until the pigs reach 180 pounds. At that time they go back on straight grain, to fit them for market. The garbage is purchased from hospitals and other public institutions.

Even if Lesyk favored self-feeding it would be difficult when wet feed is used. Instead he has the troughs against the feeding alley and has part of the wall of the pen so built that he can swing it in and keep the pigs away from the troughs. The feed is placed in the troughs, and when it is time to feed, the side of the pen, which is really a swinging gate, is released so that it falls and allows the pigs access to the troughs.

Lesyk has a streamlined system for cleaning out his 600-foot hog barn. There is a central alley down the

length of the barn with pens on each side. A gutter is located against each wall. The pens are bedded down with sawdust and shavings, and any that is soiled is scraped into the gutter. An endless chain goes along the gutter, and slats are drawn down the gutter scraping manure into a pit at the center of the barn. An overhead electric motor drives the chains and if all are set going at once the entire barn can be cleaned in a minimum of time.

The pit into which the manure is dumped has a sloping floor. The manure becomes sufficiently liquid so an elevator with cups on a belt will pick it up and spill it into a hopper outside. From here it can be dropped into a spreader and hauled away.

There are a number of problems that require attention in such a large-scale pig business. As you might expect, flies are a big problem and Lesyk sprays frequently. Disease is a constant threat; he vaccinates against erysipelas and hemorrhagic septicemia, and cleans all pens with a steam jet and a disinfectant before putting sows or feeder pigs into them. To take chances with disease would be foolhardy.

Barns tend to become smelly, and for this reason he has fans in the walls to change the air periodically. Steam pipes in the cement floors supply needed heat for small pigs.

Selection of breeding stock is important. Lesyk is convinced of the merit of straight Yorkshire hogs, and does not subscribe to the view that there is sufficient merit in crossing to justify practicing it. Also, he likes to keep his gilts for breeding, and wants no part of using crossed gilts for brood sows.

Gilts are selected on quality, but also on the size of the litter in which they were farrowed. "I have found that gilts from good litters—ten good-sized quality weanlings—come through with good litters," said Lesyk. He will get rid of sows with hardening udders, that are rough, old, are sick when they farrow, or that do not wean more than four or five small pigs. The result of these practices has been the development of a sow herd that gives him large litters—essential to a really profitable hog enterprise.

Breeders with one or two litters can learn lessons from some pig specialists. These know that it would be difficult if not impossible to overstress the extreme importance of large litters, good quality, good management practices and a consistent production program.



Lesyk has an excellent system of manure removal in his hog barn. Electrically driven slats scrape down the gutter pushing wet manure into a pit, an elevator moves it out of the pit to a hopper outside, and it is dumped into the manure tank (left) and hauled to the field.

HORTICULTURE



Guide Photo
Apples grown by the espalier method at the Summerland Experimental Station, Okanagan Valley, B.C.

Espaliers

IN England and on the continent of Europe, where space is limited and trees are grown for a combination of utility and beauty, espaliers are sometimes used. This term means the training of trees on some kind of framework, either on wires as for grapes, or against a fence or a wall. Pears, peaches, apricots, figs and apples can be grown in this manner. There are various types of espaliers such as cordon, horizontal types, fans, and U-shapes. The site and the root stock are both very important. Generally, for apples and pears, a dwarfing stock is necessary, and the picture shown herewith is of a cordon type growing at the Summerland Experimental Station in British Columbia.

In this country, this system of growing fruit is very seldom used, but is quite adapted to garden use where a division is wanted between a flower and a vegetable garden, or along a fence, a drive, a garden path or a wall. It is an idea for the true garden hobbyist who will take the trouble to get the right variety grafted on the right kind of root stock, and then use great care in training the espaliers.

Control of Mice

"MICE," said C. R. Ure, of the Morden Experimental Station recently, "are comparatively easy to control by means of poisoning. In the fall of the year, as soon as the grass begins to dry up, the use of wheat or oats treated with gopher poison is quite effective in destroying mice migrating into the garden area. To keep this away from birds, we generally place it in some bait station, such as a ten-pound pail turned on its side, an old milk bottle laid on its side, or a small rectangular box a foot long by six inches wide and open at both ends. These are placed at the end of the row and nearest to the field from which the mice may come. The poisoned wheat is placed inside and a small forkful of straw put over the top. Before freeze-up, it may be necessary to replenish the poisoned bait. We have found this practice reduces mice to a minimum in our orchard area."

When using poison in this way, it is very important that all poisoned bait be protected from weather, birds or anything other than mice. Just as soon as the snow has gone, all uneaten

bait should be very carefully collected and thoroughly destroyed.

Mice are sometimes believed to cause greater loss to fruit trees than rabbits, because they operate under cover of snow and may so seriously girdle trees that several, or perhaps all, of the trees in a small plantation may be fatally injured.

Fruit Breeding Under Way

THE co-operative fruit breeding project recently established on the prairies and involving the Canada Department of Agriculture and the prairie universities, is now getting well under way. This project, simply stated, involves the making of a large number of desirable crosses between fruit varieties, at the Morden Experimental Station. When the seedlings secured from these crosses have been grown to suitable stage for transplanting, they are shipped in large numbers to designated institutions where they are planted out in rows several feet apart, in a special area, protected by a strong fence and planted at intervals with windbreaks.

The seedlings from the crosses are observed carefully and records kept of the growth habits and susceptibility to diseases. As the seedlings come into bearing, the character, quality and quantity of fruit is observed and recorded, and those showing any special promise are carefully marked, with the hope that after careful testing, one or more of them may prove to be of sufficient value to warrant naming and introduction as a new variety.

The universities of Saskatchewan and Alberta are co-operating in this fruit-breeding program, and a visit last summer to the University of Alberta indicated that the project is getting nicely under way at that institution. The seedlings are planted in rows 12 feet apart, and five feet apart in the row, except for some of the smaller fruits such as the Nanking cherries and sandcherries, which are three feet apart in the row. In all, some 6,000 seedlings of tree fruits, in addition to 700 raspberry and 200 strawberry seedlings were already under test.

Windbreaks were planted 120 feet apart, and to secure rapid growth and early protection, temporary windbreaks of golden and laurel willows

were planted. Nine feet from these rows the permanent windbreaks of evergreens, including some Siberian larch and jackpine, but mainly Colorado and white spruce, have been set out. About 17 acres have now been planted in this project, and another six acres remain to be cleared before planting.

Varieties for S.E. Sask.

THE Experimental Farm at Indian Head reports that none of the standard apples so far tested have been entirely satisfactory for southeastern Saskatchewan, although Heyer No. 12 has proved to be hardy and productive, though only fair in quality. Even in apple-crab hybrids, complete hardiness is often lacking, but they are well worth growing for the excellent quality of fruit. Dolgo and Renown are recommended as crab apples that yield well and are hardy.

The Experimental Farm reports that the sandcherry-plum hybrids are considered perhaps the most useful of all the tree fruits grown at Indian Head, because they are very productive and excellent in quality for jams, preserves and dessert. Opata and Dura are believed to be the outstanding contributions for the southwestern part of Saskatchewan. The sandcherry-plum hybrids cross-fertilize readily and will set fruit when two or more varieties are planted.

Know Your Shrubs

by DR. R. J. HILTON,
University of Alberta

Red and Golden Elders

ONE of the most dependable shrubs for the garden beauty is the red elder, *Sambucus racemosa*. The very vigorous nature of Elderberry growth allows it to make a rapid recovery if it is killed back severely after a bad winter; and new shoots of five or six feet in length are common under such circumstances.

The European red elder, like its close cousin, *S. pubens*, the native American red elder, is a rather coarse shrub with large compound leaves and quite showy clusters of creamy flowers. The individual florets are very small but the flat clusters of bloom may be up to six inches across. Former easterners who remember elderberry pies with nostalgia, are thinking of the blue-berried elder, *S. canadensis*, which is too late in flowering to mature fruit on the prairies, but which has an attractive golden-leaved form that is widely used as a landscape subject. Red elders also have gold-leaved forms, and these shrubs form a useful contrast to dark green foliage of junipers, dogwoods and many other garden shrubs.

Elders are more effective when planted in groups than when used as individual specimens. They are not particular as to soil and location, and in fact they are among the better shrubs for partially shady places where soils are generally cool and moist. The red berries are said to be very useful for homemade wines, but their most important attribute is the attractive addition they make to the shrubbery, and their enticement of cheerful, fruit-loving birds in the early autumn.



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POULTRY



Canadian delegates to the Ninth World's Poultry Congress; from left to right: F. L. Wood, New Brunswick; N. Henault and A. Graton, P.Q.; Miss D. Taylor, B.C.; C. F. Ironside, Sask.; J. R. Cavers, Head, Poultry Dept., Ontario Agricultural College, and H. S. Gutteridge, author of the article below.

International Poultry Meeting

A Canadian delegate comments on the World's Poultry Congress held in Europe last fall

by H. S. GUTTERIDGE

THE Ninth World's Poultry Congress was held in Paris, France, last fall. Such congresses have been held, excepting for periods during the war years, every three years since the first held at The Hague, Holland, in 1921. They are sponsored by the World's Poultry Science Association, a permanent body open to general membership. It is interested in the furthering of the poultry industry throughout the world.

Some objects of the Congress are to stimulate interest in poultry affairs; to pool knowledge concerning the poultry industry in all parts of the world; to encourage the development of poultry research and education; and last, but perhaps one of the most important, to give widely separated members of the poultry fraternity an opportunity to meet together and exchange information.

At the Ninth Congress, there were 38 countries officially represented with an attendance of approximately 1,450 from these and other countries. The official languages were English and French, and interpreters were provided throughout.

The meetings were opened officially in the great amphitheatre of the Sorbonne (University of Paris) by M. Pierre Pflimlin, Minister of Agriculture for France. In connection with the Congress there was an international exhibition of poultry held at the Parc Versailles opened by the President of the Republic, M. Vincent Auriol.

In general, the Congress consisted of three principal divisions, namely, the sessions for the presentation and discussion of scientific papers, the international poultry exhibition, and visits to poultry farms and technical institutions near Paris. There were also a number of officially arranged social events.

Undoubtedly the technical sessions of the Congress were its most important feature. Attendance and interest in papers and discussions were very satisfactory. Sections were provided on genetics and incubation, nutrition, physiology and rearing; diseases and their control; economic problems; education and organization. In addition,

five papers of very general interest were presented to the whole body during the first morning of the meetings.

It is not possible in the course of this article to deal with individual papers or even with the individual sections. However, almost all the subjects which are the basis for research in the countries represented were brought forward through the presentation and discussion of papers.

Most of the discussions were characterized by contributions from this continent, both from the members of the large American delegation as well as those from Canada. A number of papers were proffered from Canada, from the University of British Columbia, the B.C. Department of Agriculture, the University of Alberta, the Ontario Agricultural College, Macdonald College, the Experimental Farms Service (Ottawa, Ontario and Napan, N.S.), the Science Service of the Federal Department of Agriculture, and a joint paper by the Oka Agricultural Institute and the Production Service of the Federal Department of Agriculture.

The attendance at the International Poultry Exhibition was not as satisfactory as might be desired, largely because of distance from the Sorbonne, where the main sessions were held. However, a satisfactory non-competitive display of birds was shown. There also were excellent educational exhibits and commercial exhibits, mostly from European countries contiguous to France.

IN general it may be said that the poultry industry of France is less developed than that of this continent. For that reason, delegates from the United States and Canada were not unduly impressed with the status of the poultry industry of France, as illustrated by the farms visited. Countries where the poultry industry is not as well developed as on this continent would profit from the Congress more than members of the American and Canadian delegations.

One important feature of such a congress is the opportunity provided for delegates to visit other countries

and to examine the status and facilities for research, education and extension, and to personally discuss matters of mutual interest with members of the staffs of institutions in such countries. New ideas and new methods of attack upon problems are revealed by such discussions.

It might be noted that both research and teaching are at a relatively high level in Great Britain, Sweden, Holland and Denmark, countries the writer was privileged to visit while a delegate to the Congress.

Invitations from several countries were proffered, but it was decided that the next World's Poultry Congress, to be staged in 1954, would be held in Edinburgh, Scotland. The advanced condition of the poultry industry in Great Britain, as well as the presence of a large poultry research center at Edinburgh, should guarantee a profitable meeting at that time.

(Note: H. S. Gutteridge is Chief, Poultry Division, Experimental Farms Service, Federal Department of Agriculture, Ottawa.)

Produce Hatching Eggs

MANY advantages accrue to the poultry man who produces hatching eggs, in the opinion of F. J. Higginson, Acting Poultry Commissioner, Alberta Department of Agriculture. He points out that the province of Alberta has enough high quality flocks to produce all the hatching eggs needed, and feels that local supply should be at least adequate to satisfy this local demand.

His suggestion that the disease hazard is reduced by the use of locally produced eggs applies with equal force to producers in other provinces. Also, in spite of the fact that commercial eggs are now bringing a reasonable price, eggs for hatching bring larger returns to the flock owner.

The chief requirements for the production of hatching eggs are good quality flocks and efficient management. Management practices differ very little from the practices followed by good commercial producers.

Poultrymen interested in increasing their returns by producing hatching eggs can obtain full information by writing to the poultry branch of the Department of Agriculture in the province in which they live.

It Pays To Cull

MOST poultry producers are well aware of the fact that birds in the laying house that do not produce are a source of loss. J. F. Fraser, Poultry Division, Kemptville Agricultural School, Kemptville, Ontario, points out that the feed eaten by these boarders may not be the only source of loss; the birds may also be a source of infection to the rest of the flock.

Birds which are lower in vitality than the remainder of the flock are more likely to become victims of poultry disease, due to their lack of vigor. Inferior specimens often serve as carriers and spreaders of disease.

Even if they do not suffer from a contagious disease, the undersized and weak birds often deteriorate until they die or have to be destroyed. If culled while they are still in relatively good flesh and free from disease, they can be marketed and will bring some return. If retained until they have to be destroyed they become a total loss.

FARM YOUNG PEOPLE



Manitoba winners—Irene Dyck and Elsie Peters of the Burwalde Garden Club, and Harvey Morley and Barry Durston of the Mountview Swine Club.

They Beat the Nation

Western juniors show their worth in judging competitions

ONE hundred and eighteen young people satisfied their provincial extension services that they could tell good agricultural products from poorer. The result was that they made the long trip to the Toronto Fair to determine who had learned their 4-H lessons best.

The western provinces collected a lordly share of the prizes. Alberta collected three firsts. Gordon Johnson and Vernon Peterson from the Olds, Alberta, beef club took a first, with Saskatchewan and Manitoba following in that order. Joan Krupa and Alice Rollof from the Whitemud Clothing Club, and Margery Johannson and Dana Morkeberg from the Markerville Food Club, garnered the other firsts for Alberta.

Manitoba picked up a second in the clothing judging competition, and collected firsts in swine and garden judging with Harvey Morley and Barry Durston from the Mountview Swine Club winning their competition and Irene Dyck and Elsie Peters of the Burwalde Garden Club winning theirs.

Shirley and Ivale McKenzie from

the Colonsay-Elstow Poultry Club won a first for Saskatchewan. The seed grain team from Elstow brought home a second, as did the Moose Jaw beef team. A third placing went to the dairy team.

British Columbia's seed potato judges collected a second prize; a third prize went to the swine judges from the west coast province.

Other club members won signal honors at the Royal Howard Roppel, Rockyford, Alberta, who at 21 is already a veteran grain exhibitor, climaxed his work in this field by winning the grand championship with his sample of Marquis wheat, thereby establishing his unquestioned right to wear the wheat crown for

the next 12 months. Glen Eric Flaten, 22, Weyburn, Saskatchewan, won the T. Eaton Company scholarship, staking him to four years in the College of Agriculture at the University of Saskatchewan. He has an excellent club record, and has judged at achievement days. His academic record, both in high school and in the agriculture short course at the Saskatchewan University has been consistently excellent.



Ivale and Shirley McKenzie, Saskatchewan winners from the Colonsay-Elstow Poultry Club.



Alberta's winners—Margery Johannson and Dana Morkeberg of the Markerville Food Club, Joan Krupa and Alice Rollof, Whitemud Clothing Club and (standing) Gordon Johnson and Vernon Peterson, Olds Beef Calf Club.

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Clean up with **SNAP** HAND CLEANER



I have always had trouble oiling hard-to-get-at places such as door locks, window regulators, and others, without dismantling a lot of material. I bought a piston-grip, pressure oil can, attached an eight-inch piece of one-eighth-inch wiper hose to the spout, and inserted the end of an 18-inch piece of one-eighth-inch copper tubing in the other end. Now, I can get the right amount of oil where I want it without oiling everything else in the car. The wiper hose gives flexibility, the copper tubing reaches into difficult places, and the pressure feeder gives positive results.—E.H.

To Make a Twist Drill

A twist drill of a needed size can be made out of drill rod steel. It can be made in any size, in the manner shown in the drawing herewith. Heat the end red-hot and hammer out flat; then cut, grind, harden and temper. If a drill to make a half-inch hole is needed, the dimension A should

be a quarter-inch, and B should be equal to A, so that the point will exactly center. On the other hand, if B is less than A, as shown in the sketch, the bottom of the hole can be made greater in diameter than the top. To get correct cutting angles, the best practice is to imitate those you find on standard drills.—W.F.S.

Winter Oil Flow

The grease from the differential and transmission of a car or truck becomes very thick and slow moving in cold weather. To get grease out in such weather, it is best to take a valve stem out of an old inner tube and solder it to a short pipe nipple of the right size to screw in place of the filler plug. Connecting this to a pressure air hose will force the grease out much faster. The same idea can be used on a filler plug of an oil barrel in winter to speed up the flow of stiff oil.—I.W.D.

Portable Bench

If your shop is fairly good size, perhaps you can save some valuable time by making a small work bench into a portable one. One garage mechanic

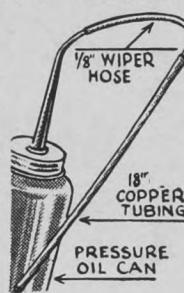


did this by shortening two legs and adding a pair of wheels. Handles were then put on the end opposite to the wheels, in such a way that when not being used they hung down the side of the legs out of the way.—R.K.W.

Workshop in December

The workshop can always provide work for slack seasons, that will be time-saving and profitable

Oiling Idea



Replacing Vise Grip

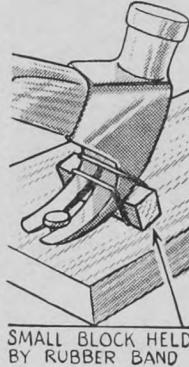
Instead of discarding a vise just because the jaw grips have lost their grip, remove the old grip plates and, using these as patterns, cut new ones from an old wood file. Mark the screw holes at the same time, with a center punch. Countersink the holes, and fasten them on the same way as the old ones.—R.K.W.

Saves Labor Sawing

When using a small portable saw to cut wood, it means taking hands from the wood to push and pull the table back and forth. I find a much safer way is to wear a heavy belt with a ring on the front. I fasten a snap from a horse halter to the saw table, and snap it into a ring on the belt. By this means, I never need to touch the saw table, as it will pull back as I step back.—H.S.

Pulling Nails

Everyone, at one time or another, finds it necessary to pull quite a few nails at one time with a claw hammer. A small block of wood fastened to the hammer with a rubber band will greatly speed up the job and eliminate many irritating slips.—A.B.



Fork Strainer

I made this handy strainer for lifting out the slushy ice which collects in the stock tank in cold weather. We took a piece of galvanized hardware cloth with about a quarter-inch mesh, wove the tines of a manure fork through two or three of the meshes, and then clipped it to the back of the fork with hog rings. Now we have a fork with which we can lift out all small or slushy ice or loose straw without difficulty.—J.M.M.

Screwdriver Doesn't Slip

Very often a screwdriver will slip out of the slot, especially when the screw is very tight. In such cases, I apply a little oil and emery dust or fine sand, which makes the screwdriver hold much better. Sometimes a tight screw can be loosened by setting a punch on the head and tapping it with a hammer. Holding a very hot rod or soldering iron on the head will also help to loosen it.—I.W.D.

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Victor TRAPS

New Pasture Grass

Continued from page 8

vated grasses can be sown to give greatly increased productivity. Crested wheatgrass, brome grass and Russian wild ryegrass are adapted to most regions of the prairies, and if used in a proper rotational grazing program these grasses can produce substantial quantities of beef or milk per acre.

It is now known, for example, that if crested wheatgrass pasture is used in conjunction with native grass, the carrying capacity of the area can be doubled. By grazing the crested wheatgrass until mid-June, native grass can remain protected during its critical growth period and thus secure a chance to produce its maximum. Russian wild ryegrass would seem to be another grass that can replace an additional acreage of native grassland to be grazed in the late summer and fall.

Very little is known regarding its curing properties, but growth characteristics suggest that it may make fairly good winter pasture in certain areas of Alberta and Saskatchewan, where light snowfalls and chinook winds make winter grazing possible.

shatters readily, it is important to swath the crop on the green side, and thresh with a pick-up combine. The seed is slightly larger than that of crested wheatgrass and is easily threshed and cleaned.

Seed production areas in Saskatchewan and Alberta have been established by the Swift Current Experimental Station. An initial stock of seed is hoped for from these areas, so that farmers wanting to grow this grass for pasture will find seed available.

Russian wild ryegrass has no special cultural requirements. As for other forage crops, a firm seed bed is necessary to make sure that the seeding depth is not greater than one inch. For pasture use, seeding should be in rows 12 inches apart at a rate of five to six pounds per acre. The best time to seed is just before freeze-up (October 15 or later). Stubble land makes a good seed bed, but abandoned land covered with an annual weed cover is also satisfactory. In other words, Russian wild ryegrass may be seeded under conditions comparable to those suitable for crested wheatgrass.

For seed production, it is better to sow early in the spring on summer-fallow. The land should be firm, and



A plot of Russian wild ryegrass in 18-inch rows at Swift Current. Seeded in May, 1950: over a ton per acre taken off in 1951.

It appears likely, however, that the only condition under which Russian wild ryegrass might be used as stored feed would be in conjunction with seed production. If the leafy basal growth is harvested with the seed crop, the crop residue after threshing has moderately high feed value, and will, therefore, make medium quality dry feed for livestock. On the other hand, if the seed crop is cut high, most of the basal leaf growth will remain on the field. It can be profitably pastured off during late summer.

Most investigators of Russian wild ryegrass in Canada so far have been concerned largely with seed production. Early attempts to grow seed in close spacings resulted in failure. These results, coupled with some losses from natural hazards such as frost, hail and wind, gave rise to reports that this grass was an uncertain seed producer. The realization that a crop is of little value unless seed can be produced on a large scale and at a low price, gave impetus to early seed production studies. There is still much to be learned about the best methods of producing seed, but the results so far indicate that if Russian wild ryegrass is grown in rows three or four feet apart, seed stalks will usually form, and from 100 to 200 pounds of seed harvested per acre. Since the seed

packing is desirable after seeding. Cultivation is necessary to control the weeds during the first two years after planting, though spraying with 2,4-D at rates normally used for wheat may serve as an alternative to cultivation.

The time required to adequately test a new crop plant and secure its general acceptance is often unaccountably long. Crested wheatgrass, for instance, was first introduced into the United States from Russia in 1898, and was favorably reported on in 1909. Even so, little attention was given to it until after 1920. So it has been with Russian wild ryegrass, first introduced in 1927, and only now beginning to gain recognition as a valuable forage crop.

Introductions from areas of similar climatic conditions to those prevailing throughout the northern great plains, have continued since the earliest days of pioneering and homesteading. Few of these introduced plants have themselves become directly adapted to the northwest area of this continent. They have, however, formed the basic material from which crops of economic importance have been developed.

(NOTE: R. Thaine and D. H. Heinrichs, the authors of this article, are working in the Forage Plants Division at the Experimental Station, Swift Current, Saskatchewan.)



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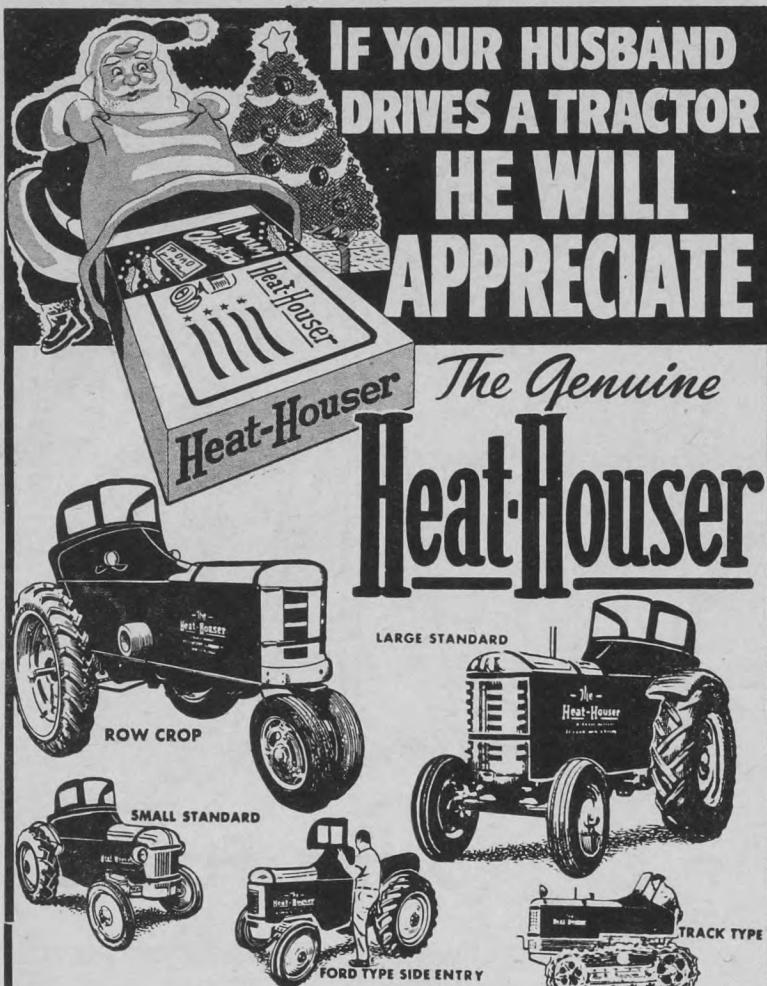


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MONTHLY

New Records Established by United Grain Growers Limited

Delegates to the 45th Annual Meeting of United Grain Growers Limited, held in Winnipeg, November 7 and 8, heard President J. E. Brownlee, report the establishment of new records in the Company's operations for the fiscal year ended July 31. Grain handlings and earnings were the highest on record; the number of shareholders increased substantially; paid-up capital was at an all-time high; and the Company was reported to be in an extremely sound financial position.

The Report of the Board of Directors showed paid-up capital amounting to \$4,508,980 which, with the inclusion of reserves and surplus, raised the shareholders' equity to \$8,001,161. Working capital of the Company grew to \$6,562,731, a gain of \$2,196,211 during the preceding 12 months. Earnings for the year were \$1,902,754 after setting aside \$625,000 for patronage dividend, the sum of these two items — \$2,527,754 being the operating revenue for the year. This compared with an operating revenue of \$1,948,282 in the previous year. Profit was established at \$561,621, after making the necessary deductions for bond interest, income tax, and depreciation and contrasted with \$393,182 a year earlier.

The appropriation for patronage dividend was sufficient to provide payments of 1½ cents per bushel on wheat deliveries and ¾ cents per bushel on other grains delivered through the Company's country elevator system. The rates were the same as those for the previous year when the total appropriation was \$550,000. The larger amount in 1950-51 reflected increased grain handlings through the Company's elevator system.

In view of the hazards encountered during the year's operations, a very high degree of satisfaction was, no doubt, felt by both management and shareholders when the report was placed before the meeting. The crop of 1950 was an extremely difficult one to handle, and was one which held a risk of serious loss to the Company in grading and handling. Frost severely lowered the quality of the various grains creating problems of grading and an acute storage problem. Customers and agents alike were often disappointed with the generally low grades and frequently the situation held additional disappointment for customers because storage space was not always available. In spite of the difficulties, more customers were served and more bushels handled than in any previous year, a manifestation of the customer's confidence in the Company and its agents.

The Company's Elevator System

The Company's country elevator system at the end of the fiscal year comprised 612 elevators located by provinces as follows: 114 in Manitoba, 203 in Saskatchewan, 272 in Alberta and three in the Peace River block of British Columbia. In addition, it had as part of its country system, 136 permanent annexes, 342 temporary annexes, 354 coal sheds, 299 flour houses and three sheds for miscellaneous purposes.

Modernization of farming methods has established new patterns of grain deliveries and has thereby created new

problems in country elevator operations. The heavy fall deliveries of grain, often direct from the combine harvester, have made speedier elevator handling facilities and greatly expanded storage space of primary importance. At the same time, the costs of construction and maintenance have mounted to such an extent that larger handlings are now required for adequate returns than was the case earlier. Largely as a result of the combination of these factors, the Company's building program has been directed to improving and extending facilities at existing points rather than extension of activities into new areas.

In spite of a number of difficulties, capital expenditures were again at a high level, approximately \$1,500,000 having been spent in enlarging and improving the Company's country elevator system, and its Port Arthur Terminal during the year. A million bushel addition to the latter raises its total capacity to 6,500,000 bushels and thereby increases the earning ability of this phase of the Company's business. Turning again to country operations, nine elevators and 29 annexes were added to the system through construction and purchase. The total country storage capacity at the end of the year was 32,574,000 bushels distributed by provinces as follows: Manitoba 5,409,000, Saskatchewan 9,985,000 and Alberta 17,180,000 bushels.

The Annual Report emphasized the continuing demand for elevator and annex construction.

Farm Supplies Department

This Department was established some 40 years ago and continues to emphasize quality and service rather than profits. Its success during the year is therefore better measured by the volume of sales rather than by earnings. Total sales for the year amounted to \$4,912,000 as contrasted with \$4,453,000 the previous year.

While the introduction of the combine harvester has greatly reduced the use of binder twine over the past decade, sales for the year showed an increase of a half million pounds over the previous season. An interesting aspect of Company policy is illustrated in this phase of the report. Early in the fall of 1950 the indications were such that increases in price, and a shortage of supply were fairly evident for the coming year. Contributing factors were drought in Mexico, the repudiation of delivery contracts by at least one exporting country and stock piling for defence in the United States. On the strength of these indications, the Company made much heavier commitments than usual during the fall of 1950, before sharp price advances took place. Subsequent selling prices to farmers were based upon the cost of the twine to the Company without regard to the price increases which had taken place in the meantime. When shortage actually developed and additional supplies were only available at higher prices, the Company absorbed the additional cost rather than increase its retail price to farmers. This policy enabled farmers to continue with harvesting plans without additional expense in this regard.

The Company continues to distribute the world-famous Weedar and Weedone 2,4-D preparations for

COMMENTARY

chemical control of weeds, manufactured by the American Chemical Paint Company. These formulations continued in high favor, and in spite of adverse weather conditions over large areas during the normal spraying period, sales showed a substantial increase over the previous year. The Company continues to distribute coal chiefly through its sheds at elevator points, and stands today as one of the largest retail coal dealers in western Canada. The Money-Maker brand of prepared livestock feeds manufactured at the Company's South Edmonton plant, continues to give satisfaction.

Settlement of Five Year Pool

The Report dealt with factors leading up to the final settlement of the five year wheat pool, including representations made by United Grain Growers Limited and other farm organizations to the Dominion Government, requesting that the final settlement be substantially supplemented by the Government of Canada in recognition of the losses imposed on western farmers in various ways during the five year period. Although there was some disappointment in western farm circles when the final settlement was made known, elsewhere, attacks were made upon the subsequent government contribution of \$65,000,000 to the funds of the Wheat Board as a deliberate and unjustifiable raid upon the treasury for the benefit of one sector of the economy.

Feeling that the complete story was not sufficiently well known, United Grain Growers Limited prepared and published a reply entitled "The Case for the Western Wheat Producer." Reading from the Report the statement pointed out:

"1. That in eight years commencing with 1941 the government paid in subsidies over one hundred million dollars to give consumers in Canada cheap bread. This subsidy was based on the depression level of 77% cents per bushel for wheat.

"2. That when the price of wheat started to advance in 1943, the government closed the market and expropriated all wheat in commercial position in Canada at \$1.25 per bushel, thus assuring itself cheap wheat for Mutual Aid purposes.

"3. That the domestic price for wheat was fixed and continued at that level for a period of four years, thus imposing upon the western wheat producer the burden of providing consumers in Canada with cheaper food, and,

"4. That throughout the four years of the Canada-U.K. Contract the western wheat producers, without State assistance, had carried the burden of selling wheat to Great Britain at lower prices than were obtained for Class II wheat.

"It was further pointed out that the western wheat producer had accepted the Canada-U.K. Agreement in good faith but only on the strength of the 'have regard' clause and that during the term of the Agreement statements had repeatedly been made by representatives of the government that Great Britain would honor the clause."

Current Problems

In the opinion of the Board inflation is the Number One problem facing the western wheat producer. While costs of production continue to mount the price of grains has tended to decline. The Report states:

"Any reasonable examination of the trend of the index of prices of field products and that of the index of farm costs, as published by the Dominion Bureau of Statistics, supports the conclusion that the purchasing power of a bushel of wheat has declined considerably in the past two years. Continued inflation in Canada may seriously reduce the purchasing power of western agriculture."

Following this the Board presented the delegate body with a resolution requesting the Government of Canada to immediately call a conference

"of all economic classes in Canada as well as representatives of provincial governments, in an effort to arrive at uniform and co-ordinated attacks upon the general problem."

The resolution stated further that "farm organizations of Canada should give inflation immediate study as constituting the most serious danger to agriculture with a view to making recommendations to the Dominion Government with respect to anti-inflation policies."

Complete agreement with the principles of the resolution was expressed by a unanimous affirmative vote from the delegates.

Indicating a second, and equally urgent problem, a further resolution submitted to the meeting on behalf of the Board of Directors focussed attention upon the need of western Canadian grain farmers for temporary assistance, arising out of declining net returns and the inability to obtain cash returns from the current crop, due to adverse weather conditions. The resolution called for the completion of the final payment on the 1950-51 wheat pool at the earliest possible time, an interim payment on the current crop at an early date, and consultation of the Dominion and Provincial governments with a view to the formulation of measures affording emergency financial assistance to farmers who were found to be in need as a result of the factors previously mentioned. A motion approving the submission of this resolution was passed unanimously.

The meeting also urged the government to adopt and put into effect a national policy for agriculture which would tend to check the trend toward a reduction of the livestock population, and beef cattle in particular—and to encourage farmers to practice more general livestock production.

Directors and Officers

Four retiring Directors were re-elected by acclamation for a three-year term: J. E. Brownlee, K.C., Calgary, Alta.; R. C. Brown, Winnipeg, Man.; R. M. Wilson, Gladstone, Man.; and H. E. Staples, Benito, Man.

At a subsequent meeting of the Board of Directors, J. E. Brownlee, K.C., was re-elected President, R. C. Brown of Winnipeg was re-elected First Vice-President, and J. Harvey Lane was re-elected Second Vice-President. Other members of the Executive Committee of the Board are J. J. McLellan, Purple Springs, Alberta, and R. Shannon, Grandora, Saskatchewan.

In addition, the following are Directors of the Company: S. S. Sears, Nanton, Alta.; J. J. Stevens Morinville, Alta.; H. W. Allen, Huelan, Alta.; J. D. McFarlane, Aylsham, Sask.; S. Loptson, Bredenbury, Sask.; R. M. Wilson, Gladstone, Man.; and H. E. Staples, Benito Man.



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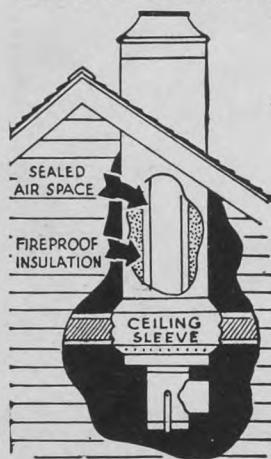
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Mackenzie Valley

Continued from page 11

that we wouldn't even attempt to grow at Edmonton. Even muskmelons and watermelons, while far from being a commercial crop, nevertheless had made much better development than in central Alberta. Other horticultural crops, whether of warm-season or cool-season preference, had made good growth and maturity. It appeared that the weather at Fort Simpson, and indeed throughout the country north of Grimshaw, Alberta, had varied from the cool, moist pattern common to the rest of Alberta. According to Mr. Gilbey, this was the case, and the whole upper Mackenzie basin, as well as the Yukon, had actually experienced near-drought conditions and a good deal of warm weather. This fact, coupled with the period of almost continuous daylight experienced in June and July, accounted for the early maturity of garden and field crops throughout northern Alberta and north of latitude 60°.

TO cap all the good fortune, weather and kindness we had been shown on the trip, we were lucky enough to obtain a "hitch hike" flight in an Associated Airways plane from Simpson to Lower Hay. The plane was chartered by Mr. "Bill" Sloan, Senior Officer in the N.W.T. Wildlife Conservation Service, and through his good offices we were thus treated to a good look "over the banks" of the Mighty Mackenzie, to observe the hugeness of the country, the islands of poplars, with shining silvery stems showing like strands of fungus through the golden-hued leaves, the snowy patches of caribou moss on the muskegs, and the erratic river courses angling to the Mackenzie from the rangy Eagle Mountain escarpment to the south.

The drive south from Lower Hay was uneventful, save for very interesting side trips to the thriving Experimental Station at Fort Vermilion, to the new and very up-to-date School of Agriculture at Fairview, and, of course, to the Experimental Station at Beaverlodge, where so much pioneer work on hardy fruits and ornamentals has been, and is being, carried out. Seeing the Peace River country at harvest time, and in a year of such a bountiful crop, is in itself a great incentive for a trip through that enterprising and predominantly agricultural land. When those scenes are linked with the good condition of the Mackenzie Highway and the rather romantic frontier-like land beyond the Peace, it may well represent an important tourist route of the near future.

But what of our impressions of the North? It is customary for those who travel in unaccustomed places and by unusual routes to form some thought patterns, enthusiastic or otherwise, careless or cautious; and we three horticulturists were not exceptions.

We were impressed by the Mackenzie Valley. It is a trinity of vastness, beauty and promise. Undoubtedly, the agricultural work already under way will help the Indian population, and wean them—slow though it may be—from their complete dependence for food upon diminishing supplies of wild meat and fish. The population is small, and heretofore has been limited by such non-agricultural considerations as the

density of fur-bearing animals, scarcity or otherwise of caribou, decimation of native peoples by disease, severity of climate, and the lack of necessity to use arable land for food production. But the future? Bold indeed would he be who would predict the future of the beautiful, vast and often inhospitable North! We can see at present a few indications, however, such as the number of oil and gas exploration and seismograph crews camped through that country, the ever-increasing interest in known and unknown mineral resources, the apparent success of the Wildlife Conservation program, the northward expansion of lumbering, and the small but promising tourist traffic up the Alaska and Mackenzie highways.

Furthermore, the prairie and bush lands of northern Alberta are being subjected to a steadily increasing demand for surveys, on the part of would-be homesteaders. Already much land along the Fort Vermilion Trail from the Mackenzie Highway has been surveyed and immediately broken. Surely, if these indications are substantial in themselves, they point to population increases in the North. And increased population will mean increased opportunity for farmers like Jack Browning along the Mackenzie, and greater need of the essential knowledge now being built up at centers and stations like that at Fort Simpson.

The above remarks are subject to one important modification: that a sudden influx of population—into the north country specifically by reason of oil or mineral strikes, or into Canada generally because of some international move to alleviate population pressures in other countries—may render imperative and economic the agricultural development of large land areas in the Northwest Territories.

Whether or not the latter by-no-means-fantastic possibility would be a good thing for Canada as a whole, is a moot point, and not one for this writer to answer. We do know of greatly lowered water tables even in our time, where excessive land clearing has occurred. Has such clearing, on a continental scale, affected our climate noticeably—and adversely? On the other hand, can we in all common sense—and moral sense—continue to maintain this huge country for the normal increase of a mere 14 million people?

These are questions that may be premature, but they are not idle. I suggest that they are questions that our young trained agriculturists may need to answer well before their retirement rolls around, from public service or from some yet-undeveloped homestead in the North.

The answer is bound to be tied up in a tangle—or smooth blend, as we make it—of problems in sociology, in economics, in population control, and in principles of land use and global distribution of basic wealth. Conceivably, it may also be bound quite closely with our expanding knowledge of garden crop production along the Mackenzie, and even the greedy and inquisitive nose of Reddy the Fox may enter the picture. Perhaps the Canadian Arctic should be maintained primarily as a last ditch stand, as it were, against the inroads of our aggressive civilization.

(Note: R. J. Hilton is associate professor of horticulture at the University of Alberta, Edmonton.)

Driftwood Fire

Continued from page 10

out in deep water. In those days your people, chief, and other tribes that came down to the coast were bitter against the white men, and slew such as fell into their hands."

"Because they robbed us in trade and profaned our women and gave drink to our young men," the chief said coolly. "But since the ships that chase the whale no longer come into these coast waters, we are at peace with white men and treat them kindly, as we have treated you, stranger."

"I gave no blame on either side," I said hastily. "I but said the coast tribes were bitter against the ship men. When this smaller chief and his four men were hunting along the beach, a band of warriors hid in the boulders and mocked the cries of wild birds. The white men ran up close, and the warriors tossed spears through them. We on the ship were watching through a tube which makes things far-off seem as near to hand."

THERE was a flash of fire in the eyes of the chief. It was no such sign as my story would call for. Again, I could not hold myself.

"—you, Jim Stevenson!" I broke off. "Can you sit there and listen to the account of your degradation without batting an eye? You can paint and feather yourself up and be chief of all the Hares that ever hopped, but I'd know you for all the 24 years since I laid the last lash on your welts back!"

In the eyes across the fire, there was mild bewilderment and reproach. Never a sign of understanding or of surprise.

"Your words are strange," the chief said slowly. "How can I understand the tale you are telling?"

Whereat I called myself names for being twice fooled by tired nerves; got fresh hold of myself; and went on.

"But even the headman's anger would have worn itself, and man Stevenson would have been taken back to the white man's city, if Jodrell had not discovered who was bringing

battered by the head of a white whale —down upon the water; and to throw into it the man Stevenson without food or weapon.

"I unashed him from the stump where he was tied. No one came near to hear me whisper to him: 'There is a salmon sheen in the sky which means a storm is coming quickly. Therefore, pull a strong oar to gain the land before the storm breaks. Go warily on the shore, if you would escape the coast tribes. Here is a weapon. I slip it into your pocket, with cartridges. God-speed and may I see you face-to-face again, Jim Stevenson!'

I PAUSED. I thought that surely the man never lived who could keep from betraying himself when I repeated those words after 24 years. That sombre evening, the hard faces of the wharf wolves on the whaler, the scudding clouds whipping out of a salmon sky, the curl and kiss of whitecaps, the whine of seagulls over the rigging, and the pencilled outline of a bleak, grey coast, were memories unforgettable. I heard yet the promise which Theresa Jodrell flung at Stevenson as he was handled into the boat. I saw yet his gesture to her of final parting, as if he knew he were going to certain death. Then, there was fast work to do on deck, for night and a storm were close at hand.

I was brought out of the reverie by a word from the chief, bidding me to go on. He was leaning forward now, listening with deepest interest.

"The ship was in water too shallow for our safety." I took up the narrative again. "There was a harbor in the river's mouth, but headman Jodrell with a loud oath swore we would get back into deep water and start for the white man's city on the morrow. Though all the men wanted him to guide the ship into the harbor, his word was law, and they did as he ordered them.

"But the ship would not sail into the teeth of the storm. Its white wings were torn off. The big tree in the ship's middle broke in two and had to be chopped away with axes. We could not gain safety in deep water. Instead, we labored back and forth along the shallow coast, getting closer and closer to green reefs that would tear the ship to pieces as a wolf would tear a marmot. Even the headman lost his anger and was afraid, for darkness had fallen and where the harbor was no man of us knew.

"One by one the men ceased their useless work, and flung the headman's curses back into his teeth. It was such a storm as none of us ever before had seen. There were cries in the darkness that this storm was the Manitou's anger against us for sending man Stevenson to his death. And those who in the days gone had bullied him most and spoken loudest against him, now cried the loudest against this Jodrell for bringing a curse upon us all. For we were lost, without chance of surviving the storm in those wind-frenzied waters; and not one of us but knew it.

"It was the daughter of the headman who first saw a tiny gleam shoreward. I was sitting with her behind a canoe, out of the whip of the wind trying to comfort her with the lie that Stevenson would escape the coast tribes, cross the mountains and go down a river to a white trader's post. But she would not listen. She kept looking out into the darkness, which was like a solid wall, in the direction



"That quiz program I was on dear . . . I lost."

"Thus, 30 men were left to do the work of five-and-thirty. Again, the headman's anger flamed against man Stevenson. He was lashed with thongs and bound day and night to the stump and kept without food till he could not stand. He would have died if someone had not brought him food in the dark of night. But I did not know this until later."

"The anger of headman Jodrell grew hotter each day. All during the Moon of the Leaf, we had chased the whales up and down the narrow waters from Kok-Kanayuk to Kok-Ernivilik; but very few were the ones we caught. When the Moon of Hardened Caribou Horns came, we had taken scarcely the price of the food we had eaten. It seemed as if a medicine were working against the ship. And the headman vented his anger upon man Stevenson."

"Many times in the night, when no one was around to see, I would talk with man Stevenson. At first, I tried to sway him from his purpose not to work, but he would not listen to my words. Later, when he was lashed, I asked to do it myself, in order that I might lighten—"

food to the whipped man at night. A smaller chief, with the tongue of a raven, first saw the girl. He told her father. Headman Jodrell watched. He discovered that she loved the man who stood out against the whole ship for his honor's sake. He struck her—I saw him—when she said she would marry man Stevenson if ever they reached the city again. He told her, with an oath and a loud laugh, that man Stevenson would never return alive.

"The ship at that time was within sight of land, at the point where Kok-Kanayuk meets the sea. It was there, on a peak, that the coast tribe slew the smaller chief and his four men. Headman Jodrell said to those about him: 'Fire a gun that the hill warriors may know we are near and will be watching for a boat to come ashore to them'."

"According to his order, a gun was fired. Though I watched through the tube, I could see none of the warriors. Yet we knew they were hunting and fishing near the river's mouth. None of us guessed the purpose of headman Jodrell until he commanded us to lower a small boat—which had been

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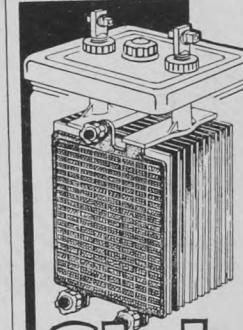
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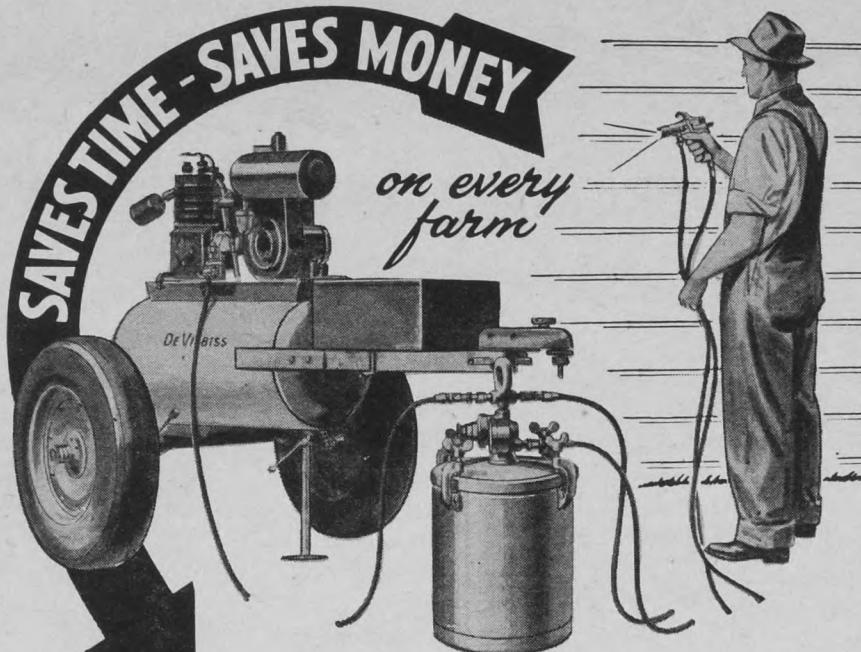
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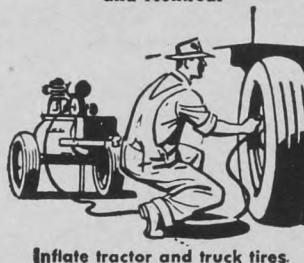


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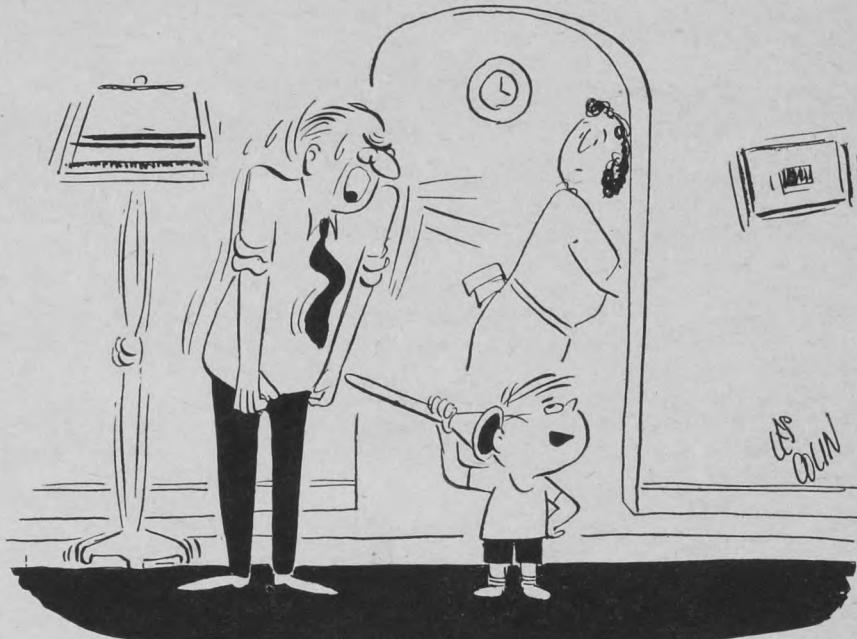
where he had gone. And so it was she who saw the gleam.

"It is he!" she cried. "He has gained the headland and built a fire!"

"Even as I looked where she pointed, the gleam leapt higher. It was such a fire as an Indian never would build, so I knew it must be the fire of the man Stevenson. Moreover, the coast was everywhere so low, save at the high headland, that nowhere

I knew it is a lie that a man can read another's thoughts through his eyes. If I could have seen beneath his paint, perhaps his features would have settled my raging doubt. But his eyes betrayed less than nothing.

Some time after I finished, the chief pushed his fire-sticks toward the center, motioned to a bed of fresh spruce boughs for me, and lay down on his own bed, wrapped in a wolfskin



"Do I hear someone calling me?"

else could a fire be seen out on the water.

"I ran quickly to headman Jodrell. 'We can steer the ship into the river harbor with that light to guide us!' I cried. After he looked at it once and again, he started shouting orders to the men. They dragged up the heavy iron which was struggling to hold the ship in place; and, straight as a feathered barb, we darted through the darkness into the harbor. There, with the iron on deep bottom, with the storm wind broken by the headland, and with the swift river current butting against the shore-driven waves, we were safe through the night, till a grey dawn broke and the storm died to a whisper.

"That morning, two boats full of armed men went ashore and I led them. We found the sudden ashes of a driftwood fire. It had been built on the wind-whipped peak of the headland, though all around were shelters of boulder rock and caves in low ledges. When the men looked at the fire, they saw and understood what the headman's daughter and I had understood long hours since—that man Stevenson, before darkness fell, had seen our ship in the storm's grasp, and had kindled the fire to guide us into harbor.

"He must have known, too, that his fire would surely bring the coast tribe to him. In the wet sand were moccasin prints of many warriors who had crept upon him during the night. There was no blood, or signs of struggle. Clearly they had not killed him there, but had taken him away, perhaps that all their village might enjoy his death. His shoe tracks leading back into the savage country were the last signs I have seen of Jim Stevenson—until this day."

THOSE last three words I added deliberately, and in English. In the eyes of the other man, there was a queer light. Tense, waiting for him to break, I met his level gaze. Right then,

rug. I could not hold myself from a last stab, as I spread the blanket.

"Jim Stevenson—Theresa Jodrell is in Nome, unmarried."

That settled it for me. I dozed off to sleep, half-amused with my fanciful imagination.

IT must have been two weeks later, for we were across the mountains and halfway to the first trading post, when Paul, one of the Crees, came into my tent one evening. As usual when he was excited, he spoke so quickly in garbled French and Cree that I caught only the general drift.

I gathered that one of our pack dogs which we secured from the Hare tribe had run off into the woods after feeding time. Its pack had not been opened since we left the teepee village, until Paul opened it to distribute the load with the other dogs. We assumed it contained caribou jerky, of which we had bought a good deal from the chief.

"But, here, look!" concluded Paul. "Look, m'sieur! Look at this!"

I was gazing at a robe, or rather a cape, all of fox pelts. It was made of snowy-white arctic skins and was trimmed with choicest black fox; but richest of all were the two beautifully matched silvers which crisscrossed in front. It was a king's ransom, that cape, or a queen's despair. The gorgeousness of it tied my tongue. And I saw, at a second look, that it was made for a woman.

Paul was breaking out again, and thrusting something else under my nose. "But that, it is not all! Look, look here!"

It was a revolver, an old thing speckled with rust, but unmistakable.

"What the—!" Paul spluttered. "Smoke of smokes, m'sieur! I do not understand."

"But I do!" said I, after a pause.



More Beavers---More Ducks

Nature's streamflow engineer unconsciously creates conditions that promote the multiplication of wildfowl

CANADA'S national emblem, protected in recent years after a long period of savage depletion by unfettered trapping, probably is one of the best friends of waterfowl. The two are never seen conversing in the silent manner of wild things, but the ducks and geese nevertheless owe much to the stubby fellow with the paddle tail and the molars with the power of a circular saw.

Evidence of the beaver's efforts, on behalf of waterfowl, has been frequently observed at various duck production projects established by Ducks Unlimited across western Canada. For a time, when beaver ranks were badly decimated, there was little or no activity along the dams set up by D.U. work crews. Now they are back at work, increasing in numbers in many areas and definitely widening their former boundaries.

Nature's most shining contribution to the engineering profession, the beaver also is one of the wild's great experimenters—especially with dams constructed by others.

In recent years Ducks Unlimited built small rock dams at strategic points on the Arm River in Saskatchewan. They functioned well despite the fact there were no beaver around. Waterfowl in limited numbers used the area for breeding purposes.

Last year residents of the district became aware that beaver were returning to the area. Dams constructed by the furred buzz-saws became fairly common. So far as can be learned, the specie had been quite scarce along the Arm River for some 15 years.

Preparing his potato plot, located beside one of the dams, a district farmer this spring noticed that the heavy runoff had raised water levels to a point close to the top of the dam. Shortly after, he cut a heavy growth of willows beside the river, piling them on the shore. He had use for them on the farm.

Arriving back 24 hours later, the farmer was amazed to find the willow pile completely vanished. At least it wasn't visible—until he happened to glance toward the dam. There, woven neatly into a tight barrier across the

spillway, was the willow pile. The beaver had determined there would be no water loss. Forced to admire the skill and rapidity with which the lodge members had bolstered the dam, the farmer got his needed poles from other willow stands along the stream.

One of the best illustrations of beaver actually repairing a dam was that recorded at the Walker project in Manitoba. During the spring break-up, ice smashed out a small portion of the weir-type dam. Here D.U. had allies ready and waiting. Almost before the break had time to allow escape of water, the colony of beaver went to work. Observed during most of their repair task, the furred craftsmen organized relays carrying sticks, mud and other debris to plug up the break. In short order, the flow had stopped and the dam was complete.

Demonstrating once again their eternal fear of losing water supplies, the beaver proceeded to ensure adequate living space by building a series of three new dams upstream from the original D.U. structure. This resulted in establishing three small ponds above the Walker project. The upstream dams caused levels in the Walker to drop slightly but the effect on the project has been negligible.

Although Castor Canadensis has been bitterly accused by western fruit growers for depredations on valuable trees and has been considered by governments as requiring control measures in certain areas, he constantly proves that his good deeds outweigh his bad.

Building his dams in the mountainous areas, creating ponds and marshes which retain the life-giving waters of the melting snows and spring rains, he innocently provides reservoirs to feed later more arid regions on the plains, where the bulk of our continental waterfowl annually breed and bring forth new life.

Dodging his ancient enemies, the wolverine and the lynx, Castor probably is much too busy to worry about the Mallards and Pintails which may be inhabiting the same pond. Possibly he doesn't realize that he is one of Mother Nature's greatest tools in her long-range plan to conserve wildlife.



[Photo by Ducks Unlimited]

The sleek fellow in the upper corner helped his fellows build this willow dam atop the stone dam built by man across Saskatchewan's Arm River.

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Whether or not this artificial leg was made of Canadian aluminum, we wouldn't know. Perhaps it was, because we do produce one quarter of the world's supply. That's quite a big thing for Canada. It means jobs for Canadians, and money from abroad to pay for Canadian imports. Right now we are hard at work on extension projects in Quebec and British Columbia; for we intend to go on playing our part in helping Canada grow. Aluminum Company of Canada, Ltd. (Alcan).

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Christmas

Continued from page 7

His face brightened perceptibly. "Thanks, Mr. Beelby."

"Do you like her?" asked Tom, "Is she nice, this Wanda?"

"All right, I guess. They haven't been here long you know." Pete fiddled with the leather strap around his school books. "But Lynn Davis, she's kind of mad about the whole thing. Gosh, Mr. Beelby, it isn't my fault I drew Wanda's name. I could trade with one of the other kids, but I wouldn't like Wanda to think I didn't want to give her a gift. Poor kid's new here, and a D.P. too." His troubled dark gaze met Tom's understanding one, and Tom felt a warm surge of love and pride in Pete.

He was a grand boy, thought Tom, good and kind, troubled about the feelings of a homeless girl. Tom patted Pete's shoulder as Jimmy came in yelling that the bus was coming. "Don't worry," he said, "get her the violin string. Everything will be all right."

But Tom couldn't help thinking about Pete's troubles, as he did the chores that morning. At 16, he thought, small worries assume big proportions. The tribulations of youth could be very agonizing, and Tom imagined that little, flaxen-haired Lynn Davis might be making things awkward for Pete.

Lynn, the 15-year-old daughter of Nell and Jim Davis, who was the district member of the Lyndon consolidated school board, was a great friend of the Winston boys. They had all grown up together. Nell and Jim were close friends of Marion's, and the blonde girl who had no brothers or sisters, regarded the Winston boys, especially Pete, as her own particular property.

Now, thought Tom, it seemed that a little girl from over the sea was going to complicate things. Too bad, especially at Christmas, then he comforted himself that this was the last day of school and that holidays would help Pete's problem.

CHRISTMAS! He could hardly wait. I'm as bad as the kids, Tom thought. He had spotted a slender spruce tree down near the edge of the swamp. He figured he and the boys would cut it down the day after tomorrow. Tom whistled tunelessly but happily.

He had ordered all his Christmas presents by mail, except one for Marion, and like Pete, he didn't know what to get. He hoped the twins would like the construction sets he had bought for them, and he knew Pete would appreciate the fine leather wallet.

But what was worrying Tom, was that he wanted to get Marion something extra special, something she really wanted, to show how much he thought of her, and it was very difficult to discover just what her present should be.

Then he began to think how lucky he was to be at Cloverdell. It was more than two years now since he had come as half-boarder, half-partner, well, what was he? A friend, I suppose, he thought. It was hopeless to think that Marion ever felt any other emotion than friendship for him. But, he told himself, he should be grateful for that. And he was.

He looked around the barn where the cows were munching contentedly, and opening the door, he walked out across the snow-packed yard to the house, whistling his tuneless whistle.

Marion was sitting at the table, a note-pad and a pencil in front of her. He could tell by her flushed cheeks and bright eyes that she was thinking of something pleasant, and as he came in and took off his heavy jacket and red and black checked cap, she said, "Do you know, I've got the best idea for Christmas Day."

"You have?" His grey eyes beamed from behind the thick lenses of his glasses, and he thought for the thousandth time, how pretty and sweet she was, in her blue dress, her curly brown hair shining, her cheeks as pink as the blossoms of the geranium on the window ledge behind her.

"I'm going to invite those people from the Douglas place. That little girl, Wanda, and her father." As Tom looked surprised, Marion went on. "I couldn't help thinking over what Jimmy said last night about them being displaced persons. I don't suppose anyone has thought about inviting them for Christmas."

She continued, as she wrote names on her notepaper. "Let's see. Mr. and Mrs. Davis and Lynn, that's three. Old Mr. and Mrs. Clements, who always come to us for Christmas, makes five. This little Hertz girl and her father, seven, and we five, that makes 12. Just right for the table."

Tom thought. "We five!" How good

it sounded! Marion smiled up at him. "It's just as well that Mike Gilbraith has gone to spend Christmas with his girl. That would have been 13."

It would have been nice, though, Tom thought, if Mike, their new neighbor who had bought George Kindersley's farm, could have been with them for Christmas, too. He nodded in approval of Marion's plans.

Marion said, "Will you go and invite these Hertz people?" Her blue eyes were full of sympathy, and her voice was gentle. "It must be awful to think about the first Christmas in a new land among strangers. Maybe you could go today. Give them plenty of time . . ."

Now here's a complication, thought Tom. Pete is going to run into trouble. What's Lynn going to think when the Viennese girl comes to our house for Christmas?

But he couldn't oppose Marion's idea. No one knew better than Tom how the warmth and friendliness of Cloverdell and the Winston family, could banish loneliness. If Marion wanted to invite the strangers, that was sufficient. If Marion wanted old George Kindersley to come to the party, Tom would have to go and ask him, only thank heaven Marion didn't.

SO that afternoon Tom Beelby strode off along the snow-packed road toward the small cabin on the old Douglas place wondering when he reached it, how on earth this stranger could contemplate living there for long.

Maybe he's just putting in time here until spring, Tom thought. He felt a surge of compassion for anyone not as fortunately situated as himself, and a warm feeling of thankfulness swept over him, as he thought of his home, Cloverdell.

Tom knocked hesitantly at the battered old door of the cabin, and a cultured voice with a decided European accent, called to him to come in.

The man who stood at the table, and, as Tom entered, laid a violin carefully into its plush-lined case, was tall and thin and grey. Tom figured it would be difficult to judge his age. His hands were slim and delicate, with long, sensitive fingers, and his face was patrician, with an aquiline nose, deep set blue eyes and a mouth that, tight and with deeply engraved lines about it, suggest the owner had known much pain.

"Oh," said Tom involuntarily, "You play the violin? It is you who . . ."

The tall man smiled wryly, "I play," he said brusquely, "when I have an 'A' string. Unfortunately this one is too short to use. Had it been the 'E' which broke so often . . . but I digress . . ." He looked at Tom and his deepest eyes were inquiring . . .

Tom felt awkward and at a loss what to say. The whole attitude of the man in front of him seemed to repel intrusion, yet Tom knew, loneliness could build a wall around the desire for friendship. He drew upon his essential gentleness and kindness of heart, and introducing himself, explained his errand and gave the tall, grave stranger Marion's invitation to spend Christmas at Cloverdell.

The face of the man who stood opposite to Tom, wore a strange expression as Mr. Beelby stopped speaking.

"Won't you sit down, please?" Mr. Hertz motioned to a rickety chair. "You are indeed kind," he went on, in



his clipped foreign accents. "My little daughter, Wanda, has spoken many times of this . . . Pete Winston. She says he is 'tres gentil' . . ."

He looked at Tom from under his rather heavily marked brows, "sometimes the French phrase fits better than your English . . . no?"

Tom grinned. "Afraid I'm not much at French phrases. Bookkeeping was my occupation."

"And now? You are not now a bookkeeper?"

"I'm a farmer. Trying to be, at any rate," said Tom cheerfully.



"I am Walter Hertz," said the father of Wanda. "Violinist, linguist . . . and a displaced person."

His sensitive mouth twisted and as Tom said nothing, his grey eyes sympathetic behind his spectacles, Hertz said quickly, "Do not mistake me. I am not bitter. We are deeply grateful for the opportunity to live here. We were refugees in England for many years. Now we are offered security in this free Canada . . . but . . ."

"But you can't see yourself farming," said Tom, simply, and Walter Hertz shook his still handsome head.

"No. The work one is accustomed to, is hard to obtain without some . . . what do you call it . . . pull? So far we have not starved. There is only Wanda and myself. My wife died . . . with the baby son, in a concentration camp . . ."

Tom didn't know what to say. What could one say to a man who had lost his wife and son in a concentration camp, who must have known intolerable things, whose future was still dark and uncertain? Tom put out his hand. The eyes of Walter Hertz were suffused as his slim fingers closed over Tom's.

"Well, I had better be getting back," said Tom, huskily. He ached for the familiar comfort of Cloverdell. The little dark shack and the tragic figure of Hertz made him feel unhappy and depressed, when the door opened and the girl, Wanda, came in.

In her worn snowsuit of dark blue, she still made a striking little figure. Her eyes were deep blue and heavily lashed, and as her father introduced her to Tom, she almost made the gesture of a curtsey. Then, laughing, she held out her hand, and turning to her father, said quickly, "See! Oh see what I have for you . . . An 'A' string for the violin . . . Pete! Pete Winslow gave it to me for Christmas!"

An expression of incredulous delight flashed across her father's face as she put Pete's present into Hertz' hand, and Tom watching, saw how the child's beautiful eyes lighted and shone as they gazed at the man, who, almost oblivious of Tom, with trembling fingers, put the missing string on the violin.

"Play father, please," she whispered, and Tom listened, his heart beating quickly, his grey eyes moist. The tender notes of Schumann's "Traumerei" filled the shabby little room and seemed to transform it.



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annual statement

CAPITAL
\$7,000,000

RESERVE
\$11,000,000

ASSETS

Deposits with and Notes of Bank of Canada	\$ 45,552,916.78
Notes of and Cheques on Other Banks	30,759,078.03
Other Cash and Deposits	8,198,191.80
Government and Municipal Securities (not exceeding market value)	187,449,486.38
Other Bonds and Stocks (not exceeding market value)	9,318,815.23
Call Loans (secured)	5,967,142.76
TOTAL QUICK ASSETS	\$287,245,630.98
Commercial and Other Loans (after provision for bad and doubtful debts)	228,141,913.08
Liabilities of Customers under Acceptances and Letters of Credit (as per contra)	12,191,326.38
Bank Premises	7,960,594.22
Other Assets	66,577.16
	\$535,606,041.82

LIABILITIES

Deposits	\$503,780,084.40
Acceptances and Letters of Credit Outstanding	12,191,326.38
Other Liabilities	205,443.84
TOTAL LIABILITIES TO THE PUBLIC	\$516,176,854.62
Dividends due Shareholders	353,441.84
Capital, Reserve and Undivided Profits	19,075,745.36
	\$535,606,041.82

PROFIT AND LOSS ACCOUNT

Profits for the year ended 31st October, 1951, after contributions to Staff Pension Fund and after making appropriations to Contingency Reserves out of which full provision for bad and doubtful debts has been made	\$ 2,862,000.30
Provision for depreciation of Bank Premises, Furniture and Equipment	475,600.05
	\$ 2,386,400.25
Provision for Dominion and Provincial Taxes	1,150,000.00
	\$ 1,236,400.25
Dividends at the rate of \$1.20 per share	\$840,000.00
Provision for Bonus of 20c per share payable 1st December, 1951	140,000.00
	\$ 980,000.00
Special Provision to write down Bank Premises	150,000.00
Balance of Profits carried forward	\$ 106,400.25
Profit and Loss Balance 31st October, 1950	1,969,345.11
	\$ 2,075,745.36
Transferred to Reserve Fund	1,000,000.00
Profit and Loss Balance 31st October, 1951	\$ 1,075,745.36

RESERVE FUND

Balance at credit of account 31st October, 1950	\$ 10,000,000.00
Transferred from Profit and Loss Account	1,000,000.00
Balance at credit of account 31st October, 1951	\$ 11,000,000.00

I. K. JOHNSTON
President

L. S. MACKERSY
General Manager

Marion's present. He wondered desperately what he could get for her that would intimate how much he regarded her, and yet not embarrass her, and still couldn't think of anything that was good enough.

AND then, suddenly, it was Christmas morning. The tall Christmas tree stood in the corner of the living room and was as Jimmy said excitedly, "Just plastered with decorations."

"My green chains look real nice," said John complacently.

"My red ones do too," asserted Jimmy.



"We'd simply love to have you for Christmas dinner!"

"I think my silver stars are pretty fine," boasted their mother, her blue eyes full of laughter and love for her family.

"What about my green mosquito netting candy bags?" inquired Tom, as he regarded the bags bulging with colored candies, that he had filled the night before.

"And our presents," said John blissfully, "the best presents we ever had." The twins sat down on the floor to build models with their construction sets. Pete carefully folded a five dollar bill and put it in his new wallet, and Tom saw the boy sneak a tender glance at a snapshot that he transferred from his old wallet to the new.

Tom wrapped the red and black checked wool scarf that Marion had knit for him, "to match your cap," around his neck, and felt a glow in his heart as its warm folds reminded him of her kind thoughtfulness of him. At last, in desperation, he had bought her a big box of chocolates for Christmas. And though it was the best he could find in the Lyndon drug store, he knew Marion didn't care a great deal for chocolates, and she thanked him so warmly for them that Tom felt more ashamed than ever.

He had made up his mind that he would find out what Marion really wanted, and as soon as the stores opened again after Christmas, he would buy it, no matter what it cost.

"Now," said Marion, after everything had been unwrapped and exclaimed over, the twinkling red and blue and green and silver lights on the tree had been tested and found perfect, and a pile of white and red and green tissue paper and scraps of colored ribbons accumulated on the floor beneath the tree, "Now it's time to get ready for the company. Boys, clear away the wrapping paper. I must get the turkey into the oven."

"All hands on deck," said Tom. "Jimmy, we will help with the spuds. John can run back and forth doing errands. Pete, how about setting the table."

"I made place cards," said Marion.

As Tom, his eyes quizzical behind the thick glasses, laughed at her, she said flushing, "Well . . . I want the

table to look nice . . . especially if Mr. Hertz is . . . is used to something different."

Tom said gently, "He could never have been used to anything, anywhere, better than your home," and her blue eyes were suddenly misty as she raised her gaze to his.

"Oh, Mr. Beelby," she said softly, "Thank you," and hurried off to the kitchen.

"Don't forget to put Lynn's place card next to yours, Pete," said Jimmy, his freckled face grinning at Tom.

"I'll put it where I think fit." Pete's dark face wore a frown, and Tom hoped that the blonde Lynn would not be too disturbed at the advent of Wanda Hertz, but the sliver of worry over Pete's troubles vanished from Tom's mind as time slipped by and John, peering from the living room window, yelled:

"Here they come. Here's Davis's car coming in the yard, and old Mr. and Mrs. Clements with them. She's a real old lady, isn't she, Mr. Beelby? I bet she a hundred years old!"

MARION was at the door welcoming her guests and Tom, in the background, saw the radiant smile that blonde little Lynn bestowed on Pete, and the erasing of Pete's frown as he smiled back.

"Merry Christmas, Pete," she said sweetly, as Pete with Jimmy and John sticking closer than burrs to a woollen jacket, bore her off to see the Christmas tree and their presents.

Tom, peeping around the living room doorway, saw Pete present Lynn with a white, tissue-wrapped parcel tied with a big red satin ribbon bow, and caught the sparkle of the girl's bright eyes and the satisfied toss of her yellow curls.

Mrs. Davis put on a big blue apron and went to help Marion in the kitchen, and old Mrs. Clements proved she was not nearly a hundred years old by helping from the rocking-chair by the stove. Jim Davis, old Ben Clements and Tom sat down in the living room to talk until dinner was ready.

"Having an awful time with the High School in Lyndon," said Jim Davis, shaking his grizzled head with exasperation. "Yes sir," he went on, as Tom looked sympathetic. "We sure are having a time! Just get nicely going, when one of our teachers up and quits at the end of this term."

"That's too bad," Tom murmured perfunctorily. He glanced out of the window. What had become of Walter Hertz and his little daughter? Surely they were coming. In spite of himself, Tom felt a sudden bleakness of spirit. Maybe the man felt that he had been invited only out of politeness. Maybe he would be too proud to come, and he and that lovely child would spend Christmas in the dreary cabin. Tom wondered if he should suggest that Jim Davis drive as far as the Douglas place, and bring Hertz and his daughter to Cloverdell.

Engrossed in his surmises about Walter Hertz, Tom gave only a part

of his attention to what Jim Davis was saying.

"Yes sir! Now we've lost our French teacher. She left to be married. How can we get another French teacher in the middle of the school year? And French is compulsory."

There they were now! Tom was relieved and pleased to see the tall, spare figure of Walter Hertz and the little girl in the shabby snowsuit, coming along the drive from the gate. He saw too, with delight, that Hertz carried his violin case.

"Excuse me, Jim." Tom got up and went into the kitchen.

"Here they are," he said to Marion and she turned from basting the turkey, and went with him to the door, as Mrs. Davis pushed the huge bird back into the oven.

Tom standing beside Marion watched Walter Hertz come up the steps and bend over Marion's hand with old world courtesy. With a pang of envy, Tom observed the graceful figure, and wished again that he had the easy ability of men like Hertz and Michael Gilbraith, the ex-flying officer, to endear themselves to a woman's heart, with charming ways. Tom always felt so inadequate, so clumsy!

Then he immediately felt ashamed of his touch of jealousy and shaking hands with Hertz, took him into the living room and introduced him to Jim Davis and old Ben Clements.

Soon the stranger was talking easily and graciously to the men, keeping them interested and amused with his anecdotes and the incidents that he had observed in his travels.

The man is a wonder, thought Tom. If I had suffered as he must have done, I'm sure I couldn't talk as lightly as he does.

Then he turned his attention to the youngsters sitting under the Christmas tree. On Lynn's pink and white face there was more than the suggestion of a scowl. Wanda's big, dark-blue eyes were alight with excitement as she stared up at the glittering tree, and Jimmy gave her a gaily wrapped parcel.

"Oh thank you! You are so kind a little boy," she said in her soft voice. "You are so kind to me . . . as Pete is kind . . ." She cast an adoring glance at Pete, who blushed and squirmed and looked as though he wished he were anywhere but there.

THEN dinner was ready. Everyone found his or her place card. Pete sat between Lynn and Wanda. Tom, who saw the twins giggling and pushing at each other in the characteristic manner of practical jokers, knew that they had switched the cards in order to bring about this situation.

Tom, from his place at the head of the table, beamed down at Marion who sat at the other end, "To be near the kitchen."

"Such a dinner," sighed old Ben Clements at the end of the meal, as he surveyed the pile of food still on the table. "Every year, Mrs. Winston, it gets better and better!"

The Christmas pudding with its luscious creamy sauce was never

fruitier or richer. The fruit, the grapes, the little iced cakes and pastries that came with the coffee at the end of the dinner were received with exclamations that no one could eat another bite, and yet everyone did.

Then they sat back, replete, and Walter Hertz rose to his feet. He picked up his frosted glass tumbler of water, and looked around at the company that was strangely silent.

"With your permission," he said, "I propose a toast." He looked around the table at the faces turned toward him. "We are strangers but you have taken us in. You have made us feel . . . at home." He bowed toward a flushed and tremulous Marion. "To a gracious lady," he said, "and to the wonderful country in which that gracious lady lives."

Tom Beelby was on his feet in a moment, and so were the rest of them, and Marion sat, her cheeks flushed with happiness, her eyes misty blue, as she regarded those toasting her.

For a few minutes after, there was silence, then Marion said:

"Now you people go and sit and talk, while the boys and I clear away the dishes," but Mrs. Davis and Lynn and the little Hertz girl, Wanda, began briskly to help to clear the dishes and the plates with leftovers, into the kitchen, while Jimmy and John turned handsprings in their relief at not having to wash dishes after all.

THE two girls were soon giggling together quite happily as Marion and Mrs. Davis worked quickly, and the clink of china and silver sounded an accompaniment to the laughter and the genial deeper tones of the men's voices from the living room. Jimmy turned on the radio and the music of "The First Nowell," sung by a famous choir came with its message of peace and good will, into the room where happiness reigned.

"There!" sighed Marion, as the last dish was dried and put away and the kitchen put to rights once more. She washed her hands and dried them, and said: "Now let's go into the living room and ask Mr. Hertz if he will play his violin to us."

As Marion and Mrs. Davis and the two girls entered the living room from the kitchen, Walter Hertz rose to his feet, and Jim Davis, after noticing that Tom was standing, too, rather sheepishly stood up.

Marion said softly, "Oh please do sit down," then to Walter Hertz she said, "Mr. Hertz, will you play for us?" She smiled and turned toward Tom, then back again to Hertz. "Especially for Mr. Beelby, who loves music at Christmas that someone makes."

Tom felt a glow around his heart. There was no one like Marion. No one. There never could be.

Walter Hertz drew his violin gently from its case. He tightened the strings on the violin and bow. He drew the bow softly over the instrument, and then there was music in the living room of Cloverdell Farm, such music as Tom Beelby had only dreamed of, as the slim fingers of Walter Hertz swept the magic bow over the strings of his violin.

The haunting strains of "The Old Refrain," rose and fell in the quiet room that was fragrant with the aroma of Christmas, the "Minuet in G" followed. Walter Hertz looked around at the wondering faces watching him, and the grand notes of Gounod's "Ave Maria," filled the air.

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Then, with a sigh that perhaps only Tom Beelby heard, Walter Hertz held the bow with fingers that tightened almost imperceptibly, as softly and caressingly, the sad and poignantly beautiful melody of "Traumerei," floated around the silent listeners.

Jim Davis and his wife sat side by side on the chesterfield, and as the music wove its enchantment, Jim's work-calloused hand closed over Nell Davis' capable fingers, and their glances met and clung.

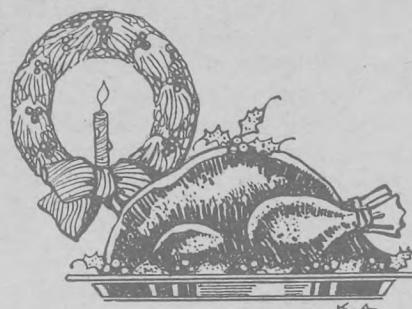
Old Mr. and Mrs. Clements looked into the lined face of each other, and between them, too, there was the same shared happiness and love, after all the years together.

From where he sat, Tom Beelby could see the little, blond-haired Lynn curl her plump fingers into Pete's brown hand as they sat on cushions under the tree, and the dark eyes of Wanda followed with grave intensity her father's flying fingers and the swaying grace of the bow.

Tom turned and looked at Marion. There she sat, in the old cretonne-covered armchair, her blue eyes bright and glowing, looking directly into his. Her gaze was steady and warm. Tom's heart beat faster.

Then the haunting melody ceased. Walter Hertz looked around, smiled as he rubbed his violin bow with resin, tightened the keys, and tried a few tentative notes.

The spell was broken. Hertz smiled again, and began to play "Hark the Herald Angels Sing." Soon everyone was singing and the room rang with the music of Christmas. They sang and sang, carol after carol, until at last, it was time to go home.



Jim Davis got up and began looking around in the hall for coats and overshoes. "Sure been a wonderful evening," he said to Tom, "Made me almost forget my troubles about that darned school."

Tom looked back into the living room. Walter Hertz was carefully putting his violin into its plush-lined case. Tom suddenly remembered Jim's conversation that had not made much impression earlier in the day.

"Jim," he said quickly, "I believe I know where you can get a French teacher for Lyndon High School."

As Jim looked at him, incredulity and relief struggling for supremacy, in his expression, Tom went on, "Mr. Hertz is a French teacher from

Vienna, and England. What you call a linguist. Wouldn't he do?"

Jim stared at Tom Beelby. "Maybe he would at that," he said slowly. "If we could get a letter of authority from the superintendent of the division, and permission for him to teach, temporarily, anyway. Do you think he would, Tom?"

"Go and ask him," Tom beamed. "It's my guess he'll jump at the chance of doing his own kind of work."

TOM followed Jim into the living room, where Walter Hertz, his thin, grey face flushing, said, when Jim asked him if he would be willing to try to teach, as a temporary substitute:

"I taught French in Vienna, Mr. Davis. I should be very pleased to teach the subject in your school, if I am permitted."

Jim Davis looked at the tall thin figure with the air of quiet dignity. "I hope you will be able to take the position, Mr. Hertz. I am sure you will be able to rent a suitable house in Lyndon."

"And why don't you teach violin, too?" asked Nell Davis, as she pushed her arms into the coat her husband held for her. "People are crazy now-a-days to learn to play, and you make such lovely music. Everyone who hears you will want to learn."

Walter Hertz looked at them. His eyes were alight with new hope and

determination. Wanda said, quickly, "O! To live in a town again. A town with shops and people and houses!"

Marion Winston's eyes were wide and a brighter blue, Tom thought, than the dress she wore. "You would teach people to play," she said, looking up into Hertz' face, "You could show them how to play like you do?"

"If they would practice," said Walter Hertz quietly, "It is practice only that makes the good music."

Marion whispered, half to herself, but Tom could hear. "I . . . would practice . . . I would . . . if I had a violin."

The happy company went into the night, Walter Hertz and his little girl in the car with their new friends, and as the lights of the car disappeared down the driveway, Marion closed the door.

"Swell Christmas, Mom," said Jimmy.

"Sure was swell," agreed John.

Pete's dark eyes were serene again. "A grand Christmas, Mom," he said. "Look what Lynn gave me," and he proudly showed them a photograph of a self-conscious looking Lynn.

Marion's gaze met Tom's. "The best Christmas we've had for years, wasn't it . . . Tom?" She smiled at him.

"The best Christmas I've ever had in my whole life," he said huskily. He knew now the present he would buy for Marion. A violin!



The Countrywoman

In keeping with Christmas, in family gatherings, it is fitting that we recall some of the significance of the visit of the young Royal couple

by AMY J. ROE

THE visit of Princess Elizabeth and the Duke of Edinburgh made 1951 a memorable year in Canada. Thousands of Canadians saw them for the first time and were captivated by their youthful charm, gracious friendliness and their sense of understanding of the people and the country visited. Still more thousands listened in to the actuality broadcasts or to the Royal Tour Diary, carried each evening over CBC network. Literally hundreds of newspaper people and photographers "covered" the tour. Millions of words, telling its story, went out each day to press services all over the world. The amount of news and photographic coverage given the tour, surprised even the press itself. Newspaper, and radio public seemed hungry for news of the Royal couple as they moved across the broad expanse of Canada.

Following the day-by-day routine, for 35 consecutive days, most with a tight-packed schedule of drives, official visits, luncheons, receptions, dinners and other evening events, one could not help but be amazed at the endurance of the two young people; their sense of responsibility and dedication to the service of the Commonwealth. The crown is the symbol which unites the various races and peoples within that domain. His Excellency, the Governor-General, Lord Alexander put Canada's official greeting in fitting words when he said:

"Speaking on behalf of the Canadian people, I should like to say that we feel it a great honor to have you both with us. More especially do we appreciate your coming to Canada at this time, after the anxious days through which you have just passed." And then after a reference to expressions of loyalty and devotion to the King and Queen during their 1939 Canadian tour, he continued:

"You will find that you have a very warm corner in the heart and affection of the Canadian people. This link with the throne is not only one of sentiment and pride, but a thing of real and tangible strength and one of the most important factors in uniting the peoples of the Commonwealth into one great brotherhood under the British crown."

There was the added note of concern for the King's health. Always the Princess referred to it before going on to express official greeting or thanking Canadians for their kind and generous hospitality. On that occasion, in Ottawa, she said:

"YOU will, I know, be very thankful that the King, my father, is progressing well and is gaining in strength daily. The anxiety of these last two weeks has seemed endless but all the time my father himself, my mother and all our family have been wonderfully sustained and comforted by the thoughts and prayers which have come from this country and other parts of the Commonwealth—indeed the whole world. We have been deeply moved by the knowledge of your love and I thank you with all my heart."

"I am grateful, too, for your quick understanding of my wish to be nearer my father—and my mother—until I could come here with a happier heart to enjoy our visit free from anxiety. I have always cherished a dream of coming to Canada and ever since the King and Queen came back 12 years ago with tales of its splendors, the dream has been more compelling."

Another warm family touch was given when Princess Elizabeth presented the needlework carpet made by Her Majesty Queen Mary to Rt. Hon. Vincent Massey, chairman of the National Gallery of Canada, on behalf of the Imperial Order Daughters of the Empire, during her visit in Canada's national capital. Many who heard that broadcast speech will long remember her firm, young voice speaking with justifiable pride:

"You have asked me to hand into the keeping of the National Gallery the embroidered carpet which my grandmother, Queen Mary, has made with her own hands and which is lasting evidence of her unrivalled skill and artistry. I am very glad to do this, and I know that my grandmother will be most happy to think that Ottawa is to be the final home for her work."

"For my grandmother has many happy memories of her visit here in 1901. She came with the late King when they were the Duke and Duchess of Cornwall and York. And she has asked me to tell you that the 50 years which have passed have done nothing to dim the brightness of this memory in her mind . . . I know that you will value the carpet, not only as a work of art but also as a personal link with my father's house."

THOUGH most of the occasions were necessarily very formal and the speeches stilted, there were heart-warming moments when token gifts, typical of the various provinces and cities, were presented and particularly when there was added, "something to take home to the children," for small Prince Charles and Princess Anne. Princess Elizabeth, while in Washington, presented a gift from "my father, the King," of a rare pair of candelabra and a carved gift landscape mirror with a huge flower painting inset, to President Truman, who expressed his gratitude and pleasure in the honor of their visit and said:

"This overmantel will be placed in the White House, and it will be greatly cherished as a mark of the close tie that binds our two countries together. This country is built upon principles which we have inherited from the British people—our love of liberty, our system of justice which is based

upon the English common law, our language—these and many other things give us a strong feeling of kinship."

"Over the years we have built these ties into a remarkable international friendship. We have had our differences in the past, but today it would be just as hard to imagine a war between our countries as it would be to imagine another war between the states of this country. It just couldn't happen."

"I hope that the day will soon come when the same thing will be true among the nations of the world. This depends on how well our two countries stick together and work for world peace. I am sure that we will do a better job for world peace because your visit here has strengthened the bonds between us."

So young a couple and so well did they carry out their responsibilities! Many heard the Duke of Edinburgh's rich voice read the scripture lessons at church services in a number of Canadian churches. Our hearts were stirred by the grace and dignity of their bearing on all occasions. The good-bye message came from St. John's, Newfoundland, when Princess Elizabeth noted in her final speech that the moment had come to "say good-bye for a time and thank you. It is not easy to say either of these things" . . . not easy to say good-bye because "I am also leaving a country which has become a second home in every sense." . . .

"Nor is it easy to say thank you, because no words of mine can express what I would like to tell you. We have seen and heard so much that has moved our imagination and touched our hearts. We shall take with us memories that will always draw us back to this country; the towering buildings of your big cities and the charm of your smaller communities, the blue skies and the golden colors of autumn—or as I am now learning to call it, the fall—and the trees and fields beneath the first snow of winter—all the beauty and majesty of Canada."

"I thank you for having shown me these things. I thank you too, for the glimpse you have given me of the greatness of this nation and the even greater future which is within its grasp."

"I have seen this future in the eyes of hundreds of thousands of your children and have heard it in their voices. For as long as I live I shall remember and cherish fondly the greetings which came to us each day from these young people." And in conclusion, recalling the words of the Governor-General to the effect that the link with the crown was one of the most important factors in uniting the peoples of the Commonwealth into one great brotherhood, Princess Elizabeth said:

"You have shown me the reality of this, and I thank you for it. Destiny has given me the great privilege of being able to live my life in the service of that brotherhood; in these five weeks you have given me new strength and inspiration, which I know will always help me in the future. For that I am deeply grateful and say, not good-bye, but au revoir."

Immediately after that farewell speech, broadcast on November 11, more than 10,000 miles of CBC network linked together choirs in Vancouver, Winnipeg, Toronto, Montreal, Halifax and St. John's, making a mixed choir of 100 voices. Choirs sang separately and together to the accompaniment of a 45-piece Toronto orchestra, three selections. The final piece was *Auld Lang Syne*, with the various choirs singing verses separately in this sequence: Vancouver, Winnipeg, Halifax and St. John's, with Toronto choir joining in each chorus and the last verse sung by all six choirs. Canadian voices in song from the Atlantic to the Pacific, separated yet united!



Christmas is the time for the re-reading of the old, old story.

Glazing Pottery at Home



Applying the art glaze carefully to a simple design on a mug.

YOU can have some good fun, glazing pottery at home. It will provide an interesting hobby, either for yourself or for some other member of the family, who may have a flair in the use of color and design. The finished articles will yield some quaint, attractive and useful articles which may be used as gifts or for money-making ideas for a club or some other social group in your community.

First you purchase some heavy, plain white porcelain mugs, bowls, pitchers, plates, etc. I secured mine at the china counter of a large departmental store but you may find them in stores in smaller centers, often on the bargain counter. The other materials needed are listed on this page. They may be purchased direct from an arts' supply store in your nearest city or ordered by mail.

The art glazes are not expensive and are simple in application, if you follow directions carefully. They can be "fired" or baked in the oven at home or can be dried by air if left standing undisturbed for three full days. They may be washed with soapy water, are resistant to light, alcohol and acids. They are also weatherproof. They can be used on many types of objects; china, glass, pottery, metals and plastics.

Art glazes are different from other paints in that they do not mix to form secondary colors in the usual way. For example, a mixture of red and blue does not make purple but red, blue and white does make mauve. They are available in red, yellow, blue, green, orange, burnt sienna, raw sienna, white, black and transparent.

transparent. At first you will do well to work to a design using the straight colors. As you get more experience you can then experiment until you achieve a desired shade. To make a pastel shade add a very little white. A translucent or stained glass effect is obtained by mixing the color with the transparent glaze.

Having secured the glazes, you must take care of them by covering each jar after using. Wipe off any surplus glaze that has spilled over and screw the top on tightly. If a glaze becomes too thick, it may be thinned with a few drops of purified turpentine. Use an eyedropper to control the amount added.

Having decided first on what is to be decorated and then obtained the art glazes, you choose a suitable design. One can get excellent books of design or copy one from a magazine or draw your own. One of the delights of pottery glazing is that it can be personalized. Write a name, monogram or motto in large, flowing handwriting on a piece of paper until you get a style and size to fit a certain space. Then trace a pattern from the best sample. It is essential not to try to do any free-hand decorating until you have practice. Do not make designs too small. Be bold about both the size and color of a chosen design.

A set of mugs, or small plates, decorated with initials or names, would be welcomed by the small members of the family, or by pupils at school. A simple sports motif such as would be suggested by curling, skiing, skating, hunting would bring delighted remarks from the members of some club of young

Something different in the way of a hobbycraft, providing interesting occupation and some practical and attractive results

by JEAN RICHARDS

people. They would be ideal for serving coffee or hot chocolate at the end of a social evening. If the club has an insignia or special "colors" you can work them into the design.

Try to use a design that has a special significance. If the person who is to use it is interested in stamp collections, draw in stamps all over the piece of pottery. For those who study birds, animals, trees or flowers sketch in some motif that will interest them.

THERE is no limit to the number and variety of ideas one can use. Pennsylvania Dutch patterns are easily done and are much in fashion just now. Indian and Mexican figures are fun to draw if you keep the detail simple. They can be painted in bright bold colors. Plates, cups and saucers may be decorated effectively with simple peasant designs, mottoes, flowers, fruit, animal designs or a simple scene, some landmark or name precious to the person concerned. On mugs, paint old-fashioned men's faces complete with handle-bar moustaches and straw hats or dainty ladies with ringlets. For my lady's dressing table a set of toilet articles, glass bottle, powder box, and cream jars, etc., could be decorated to suit her dainty taste. The decorative scheme decided on may be carried into other rooms of the house, such as on mirrors, vases, light fixtures, plant pots and kitchen food containers. You may come across just the right idea in a magazine, travel folder or a book from a library. You can copy it, reducing or enlarging it to fit the space you want to fill on the article to be decorated.

The next step is to clean the object thoroughly by washing it with soap and water. When dry, go over it with a piece of cloth wet with cleaning fluid, wiping every bit of the surface, so that it will be entirely free from grease or oily film. This fluid will dry by evaporation. Be careful afterwards not to touch any of the surface with your hands or your fingers will leave oily spots. If the object is set on a small board or an old gramophone record, it may be turned and moved about, without your having to touch any part of it.

Now you are ready for tracing and transferring the chosen design. The transfer paper may be onion skin paper, which is easily secured at a stationery store. That is what I used but you can, if you wish, buy special transfer paper from an art store and you have the added advantage of color. This paper comes in three colors: yellow, green and red. So if you are going to do a perfect job, buy the color of paper that you will use most in the design. The transfer paper is used on which to trace the design selected.

I use ordinary carbon paper under the tracing onion skin paper. I find that it does tend to darken the colors somewhat at the edge. But if careful,

this does not show too much. Place the tracing paper with a small piece of carbon paper under and then lay the whole thing (tracing paper and carbon) on the object to be decorated. Judge the exact spot where it should be placed, or measure and mark the center. If it is hard to hold in position, tape in place with Scotch tape. Retrace over the design with a pencil with a sharp point, as accurately as possible. Now you have the design showing faintly on the proper spot.

You cannot easily draw or paint freehand, unless you have used this type of paint before. It is hard to get a good effect if you do, so that is why you trace and transfer a pattern at first. After you have had practice, you should be able to draw freehand designs, which will look professional.

Don't rush—go slowly.

NEXT comes the fascinating job of painting on the glaze. Use a full brush. I find that a brush, fully charged with paint, is best. Work with quick, sure strokes, painting in the outline of the design first. Your hand may wobble if you go too slowly. Dip the brush into the paint frequently. But do not use too thick paint as it may blister when it is baked. Remember to use the purified turpentine for thinning. If you have



Bird designs add a gay note to pottery.

Materials Needed

Art Glazes: available in red, yellow, blue, green, orange, burnt sienna, raw sienna, white, black and transparent.

A bottle of "artists' quality" (purified) turpentine for thinning glazes.

Cheaper quality of turpentine for cleaning of brushes.

Dry cleaning fluid, and a large clean cloth.

Transfer paper: onion skin letter paper and carbon paper. Special artists' paper available in red, green and yellow.

Two brushes: one small, one medium size (numbers 7 and 11 will do). Series 461 and 208 are good, practical brushes and a number 221, flat chisel-edged brush is good for broad effects.

A pencil with a sharp point. Pottery, glass, etc., articles to be decorated.

A selected design.

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DISTINGUISH between your baby's cry of pain and cry of temper. The "pain cry" should have instant attention. For the feverish distress due to gas on stomach or bowels or those common digestive upsets, give Baby's Own Tablets at once. As one Toronto Mother reports — she finds they work every time.

"I am the mother of nine children, three of them prize babies, and Baby's Own Tablets have been my only medicine in raising them to the healthy children they now are. As soon as my children became a little feverish I at once gave them Baby's Own Tablets and in a very short time the fever disappeared and the children were normal again."

Equally effective for constipation, upset stomach, teething troubles and other minor ailments of babies. Quickly effective. Sweet-tasting. No "sleepy" stuff — no dulling effect. Get a package today. Sickness often strikes in the night. 30¢ at drug stores. Money back if you are not satisfied.



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In Jars and Tubes. M3

MENTHOLATUM

a large area to paint, do the outline first, allowing it to dry a little and then fill in the inside area. This will prevent the paint from running. It is especially important to do this when working on a curved surface.

The decorated piece is now ready for "baking" which should be given to articles that will be subject to frequent washing. Place the article in a cold oven. Then raise the heat and maintain it at 275 to 300 degrees F. for 15 to 20 minutes. Too much heat blisters the surface and darkens the colors, so be sure to keep the heat moderate. Then open the oven and allow to cool for about 20 minutes, before removing the pottery. Then remove the articles and let stand at room temperature for another 20 minutes before handling.

I experimented with both gas and coal stoves and found that I had equally good results with both. If you are using a coal stove, simply open the oven door and let the oven cool slightly. Then place the articles in the oven and keep a moderate heat for the required 15 to 20 minutes. If you haven't a control or temperature guide on your oven, be sure to use only a moderate fire.

Art glazes will air dry but it takes about three days. Even after that the surface continues to dry and so creates a strong and durable bond. But as pointed out, for articles requiring frequent washing, the oven baking is recommended.

Now you have the finished article ready to display or to send as a gift, or to offer at a sale of hobbycraft or with which to surprise your friends when they drop in for an evening party. Your articles will be something definitely "quite different" and may indeed become "conversation pieces" for the occasion.

Oil Painting on Glass

ALTHOUGH I am not an artist, I like to dabble in oil paints. So far my efforts have been confined to copying—looking at someone else's picture—but next summer I plan to make good a long-standing "threat" and actually go out with my kit and paint directly from nature.

I want to tell you about a method of painting that I have found most fascinating. It is painting on glass. The local hardware does a lot of window-glass cutting, which means that there are many odd-size strips of glass left over. I can get all of these that I want free. I have learned how to use an ordinary dime-store glass cutter quite successfully, so I cut the strips off at any length I desire. I do most of my work on five by eight-inch pieces, but, of course, the size will be determined by the picture copied.

I get out the picture I want to copy. I have a couple of manila folders full of "models." On this I lay my glass, which has been carefully washed and polished, and then I put Scotch tape over the edges at strategic points to keep the picture underneath from slipping. At first I used "bulldog" clips, but tape is more satisfactory.

Then I proceed to paint. I paint looking straight down on the picture to keep the focus right, using colors that match the "model" as closely as possible. I have a good set of paints

(Please turn to page 46)



If you bake at home—
these are easy to make

It's bound to be a "Good Morning"—when you serve delicious, hot-and-fragrant Cinnamon Buns for breakfast. They'll win you plenty of praise . . . made with Fleischmann's Fast Rising Dry Yeast!

Full Strength—Goes Right to Work

Modern Fleischmann's Fast Rising Dry Yeast keeps for weeks and weeks right on your pantry shelf. It's fast—it's ACTIVE. All you do is:

1. In a small amount (usually specified) of lukewarm water, dissolve

thoroughly 1 teaspoon sugar for each envelope of yeast.

2. Sprinkle with dry yeast. Let stand 10 minutes.
3. THEN stir well. (The water used with the yeast counts as part of the total liquid called for in your recipe.)

Next time you bake, insist on Fleischmann's Fast Rising Dry Yeast. Keep several weeks' supply on hand. There's nothing like it for delicious soft-textured breads, rolls, dessert breads—such as all the family loves!

CINNAMON BUNS

Makes 2½ dozen

Measure into large bowl

1 cup lukewarm water

2 teaspoons granulated sugar

and stir until sugar is dissolved.

Sprinkle with contents of

2 envelopes Fleischmann's

Fast Rising Dry Yeast

Let stand 10 minutes, THEN stir well.

In the meantime, scald

1 cup milk

Remove from heat and stir in

½ cup granulated sugar

¼ teaspoons salt

6 tablespoons shortening

Cool to lukewarm and add to yeast mixture.

Stir in 2 well-beaten eggs

Stir in 3 cups once-sifted bread flour

and beat until smooth; work in

3 cups more once-sifted bread flour

Turn out on lightly-floured board and knead dough lightly until smooth and elastic. Place in greased bowl, brush top with melted butter or shortening. Cover and set dough in warm place, free from draught. Let rise until doubled in bulk. While dough is rising, combine

½ cups brown sugar

(lightly pressed down)

3 teaspoons ground cinnamon

1 cup washed and dried seedless

raisins





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TUNE IN —
"MUSICAL KITCHEN"
MONDAY — WEDNESDAY — FRIDAY
TRANS-CANADA NETWORK!

Robin Hood Flour

The Holiday Fowl

A review of points in roasting the Christmas bird

by LILLIAN VIGRASS

WHETHER the Christmas dinner includes goose or turkey, chicken or duck depends on the family tradition, the number of people for dinner and the size of your oven and roasting pan. Each is delicious when roasted to a deep brown and served with all the trimmings of tasty dressing, cranberry sauce, colorful vegetables and fluffy mashed potatoes.

Many who live in the country will be able to choose the bird from their own flocks. Others will have to depend on the butcher shop supply. Look for these signs of good eating—a pliable breastbone, smooth, supple fat, firm flesh and a well-groomed look. Choose a bird large enough to allow a pound of chicken or turkey per person and up to one and one-half pounds of goose or duck.

If the bird is frozen plan on 24 hours at room temperature for thawing. Christmas morning wash the bird and rub inside with a tablespoon of salt. Stuff the main cavity and the neck with dressing, packing lightly to allow a little room for swelling during cooking.

To close the opening in the bird use small skewers or thin nails inserted through the two edges of the skin. Then using white string begin at the upper nail and wrap the string around the nails crossing it from side to side to form a laced closing.

Turn the wings to the back. You will find a twist of the tip end tucks the wing easily in place. Next tie the leg bones together and fasten the string under the tail to hold the legs snugly against the body.

Place the bird on a rack in the open roaster, breast side up. A meat thermometer is a guide to doneness but it is not at all essential. Insert it in the meaty part of the flank between thigh and the body. Do not allow it to touch the bone, however, or the reading will be much too high. Brush the chicken or turkey well with shortening and lay a cheesecloth or aluminum foil over the breast. Do not tuck it in or the meat will steam rather than roast. Prick the goose in several spots to allow extra fat to escape as it cooks.

Roast without a cover or water in a slow oven (325° F.) until the meat thermometer records a temperature of 190°. Roast chicken takes approximately 30 minutes per pound; a small turkey 25 minutes and a larger bird 18 to 20 minutes per pound. Duck and goose take from 20 to 25 minutes per pound. Keep the oven temperature as close to 325° as possible for a minimum of shrinkage and for juicier meat. To test for doneness run a metal skewer into the thickest part of the breast. Tender meat and juice with no sign of redness indicate the bird is done.

If the bird is cooked in an open pan the gravy will be a rich brown. Remove the roast fowl to a hot platter then pour off the fat for measuring. Use

two tablespoons of fat for each cup of gravy desired, returning this amount to the pan. Add as much flour as drippings and cook over low heat until a golden brown. Add a cup of cold water for every two tablespoons of fat used. If desired, add the giblets which have been cooked and ground.

Stuffing for the fowl depends on family tradition or preference. Bread dressing is a favorite for all fowl, especially turkey or chicken. It may be seasoned with sage, marjoram, thyme or poultry dressing and onion. Other additions include sausage meat, chopped giblets, mushrooms, celery, raisins or nuts.

With duck or goose add raisins and apples, cranberries or prunes to the basic bread stuffing. Rice is a favorite stuffing for duck; mashed potato for goose and my favorite with turkey is oatmeal dressing. Make a cup of dressing for each pound of meat.

Oatmeal Dressing

1½ c. oatmeal	Salt and pepper
½ c. suet	to taste
4 T. onions	

Chop onion fine; chop suet or use the fat from the fowl. Mix ingredients well and pack lightly into turkey. For a 12-pound turkey make six times this amount.

Apricot Rice Stuffing

2 T. butter	1 tsp. salt
¼ c. chopped	1 tsp. sage
celery	Water
¼ c. minced onion	1 c. sliced dried
¼ c. mushrooms	apricots
¾ c. rice	

Melt butter; brown celery, onion and mushroom. Add rice. Brown until rice is deep golden color. Add salt and sage. Add water until ½ inch above rice. Cover and steam 10 minutes. Remove from heat. Add apricots and mix. Stuff bird just before roasting.

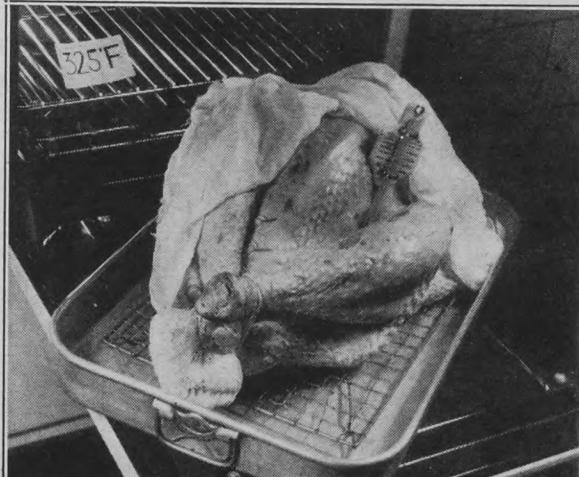
Bread Dressing

5 c. bread cubes	¼ c. minced celery
½ c. melted fat	1½ tsp. salt
¼ c. minced onion	¼ tsp. pepper
2 tsp. sage	½ c. liquid

Cook onion and celery in fat until a yellow color. Combine ingredients lightly but thoroughly. Vary liquid to suit family preference. Taste for proper seasoning. Stuff bird just before roasting.

Variations: Add 1 c. chopped walnuts, pecans, peanuts, chestnuts, or other nuts; ½ c. sausage meat, crumbled and fried; ground or chopped giblets; 1 c. chopped apple and 1 c. raisins; 1 c. cooked prunes or dried apricots; ¼ c. diced green pepper and ¾ c. diced celery.

Substitute cooked white rice for bread cubes in above recipe.



Roast the turkey in an uncovered pan in a slow oven



Family and friends will welcome this rich and flavorful foamy fudge.

Christmas Candies

Home-made sweets make delicious eating at Christmas or any other time of year

by EFFIE BUTLER

CANDY-MAKING can be pleasant and satisfying—and Christmas is a time for such indulgence. But the best results can be had only by strictly following directions as to quantities, methods, and temperatures.

The "cold water" test for cooking time is quite satisfactory. But the use of a candy thermometer, which costs little more than a pound of your favorite chocolates, can turn your home candy-making from a game of guesses into a series of satisfying results. With care and proper use, your thermometer will last almost indefinitely and will pay for itself many times over.

Candy should be made in a smooth saucepan large enough to allow it to boil. Butter the saucepan, an inch or two down from the top, to prevent the syrup from boiling over. After a boiled syrup is beaten, it should look like very thick cream, otherwise it has not been allowed to cool sufficiently before beating.

Butter and flavorings should be added when the candy is finished boiling. Never add cream of tartar until syrup begins to boil.

Foamy Fudge

2 c. brown sugar	½ c. milk
1 c. white sugar	½ c. corn syrup
1 T. butter	1 tsp. vanilla

Put sugar, milk, and syrup in a deep pan and heat. Stir occasionally until sugar melts. Boil until it forms a small ball when dropped in cold water (238° F.). Add butter and vanilla and allow to cool until almost lukewarm. Beat until smooth and creamy. Pour into a buttered pan to a depth of $\frac{1}{2}$ inch or more. Mark in squares. Let stand until firm and dry.

Turkish Delight

2 T. gelatin	Rind of 1 orange
2 c. granulated sugar	grated
½ c. orange juice	¼ c. boiling water
½ c. cold water	¼ c. lemon juice
	Icing sugar

Soak gelatin in cold water for 10 minutes. Add boiling water and stir until dissolved. Add sugar and boil slowly about 20 minutes or until thermometer reaches 232° F. Remove from the stove and let cool a few minutes before adding orange and lemon juice and grated or finely shredded rind of the orange. Coloring may be added if desired. Stir all together and pour into a shallow pan that has been dipped in cold water. Let stand all day and overnight. When set and firm, cut into squares with a sharp knife and roll in icing sugar.

Chocolate Fudge

3 c. white sugar	¾ c. milk
3 T. cocoa	1 tsp. vanilla
1 T. butter	¼ tsp. salt
2 T. corn syrup	

Combine sugar, syrup, milk, cocoa, and salt in a deep pan and cook, stirring slightly to keep from sticking. Boil gently until the "soft ball" stage (238° F.) is reached. Stir in butter and vanilla and remove from fire to cool. Now beat until creamy. Chopped nuts, raisins, coconut, peanuts or cherries may be added. Pour into buttered pan. Mark in squares. Let stand until completely cool and firm.

Butterscotch Candy

1 c. granulated sugar	1 tsp. vinegar
1 c. corn syrup	½ c. butter

Boil sugar and syrup together stirring to prevent it from sticking to the bottom. Add vinegar. Continue boiling until syrup forms firm balls when tested in cold water or until the thermometer reading reaches 254° F. Add butter and remove from the heat and pour into greased pans. When cool mark in squares.

Chocolate Crunch

8 oz. sweet chocolate	½ tsp. vanilla
1 c. rice krispies	¼ c. candied cherries

Melt chocolate over hot (not boiling) water until smooth. Add rice krispies, vanilla, chopped cherries and mix well. Pack in a greased pan. Chill overnight in the refrigerator. Cut in squares when firm.

Coconut Creams

3 c. granulated sugar	1½ c. milk
2 T. butter	¾ c. shredded coconut
¼ tsp. cream of tartar	½ tsp. vanilla

Mix sugar and milk in a deep pan and bring to a boil. At this point add cream of tartar and continue to cook until the "soft ball" stage or 238° F. Remove from the fire, add butter, coconut and vanilla and beat until smooth and creamy. Drop in spoonfuls on an oiled paper to set.

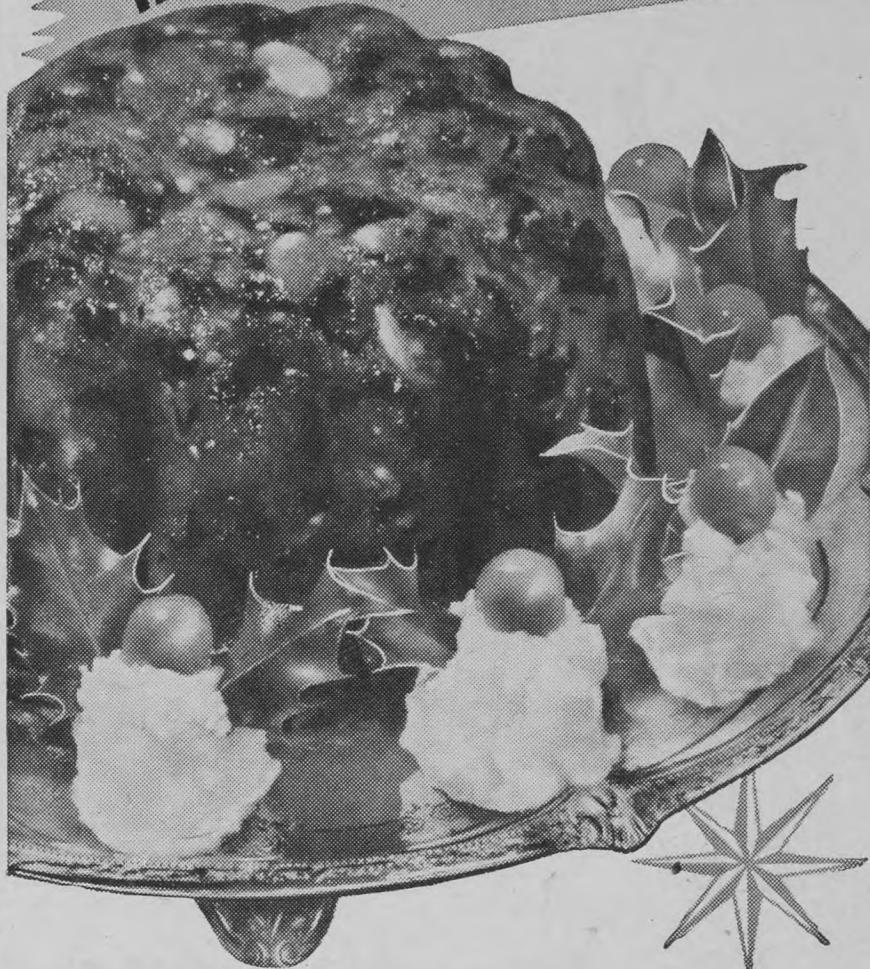
Date Bonbon Drops

½ lb. pitted dates	1 egg white
¼ lb. shelled walnuts	2½ T. sugar

Put dates and nuts through food chopper with fine blade. Knead and shape into date-like pieces. Chill overnight. Beat egg white slightly. Add sugar. Dip bonbons in the egg mixture and place on a buttered tin. Bake in an oven of 300° F. for 25 minutes, or until crisp. Makes about 2 dozen bonbons.

Sing Heigh-ho!
for this sumptuous

MAGIC FRUIT PUDDING



HERE'S the fruitiest fruit pudding . . . and the most delectable texture and taste that ever tempted a sweet tooth! It's Magic's modern version of a marvellous old recipe—and the result is right out of Dickens!

Hurry and get those fine, fresh ingredients from your grocer's new stocks! You know how good your pudding's going to be, for you choose everything yourself! And Magic rewards you with that wonderful light texture . . . brings out the spicy-rich goodness of each ingredient. At less than 1¢ per average baking, dependable Magic protects results whenever you bake!



MAGIC FRUIT PUDDING

1½ c. seedless raisins
1 c. currants
1 c. cut-up seeded raisins
¾ c. cut-up mixed candied peels and citron
½ c. almonds, blanched and halved
1½ c. once-sifted pastry flour or 1½ c. once-sifted all-purpose flour
3 tsps. Magic Baking Powder
1 tsp. salt
1 tsp. ground cinnamon
½ tsp. ground ginger
½ tsp. grated nutmeg
¼ tsp. ground cloves
1 c. chopped suet
1 c. coarse soft bread crumbs
1¼ c. lightly-packed brown sugar

1½ c. shredded raw apple
1 c. shredded raw carrot
3 eggs, well beaten; ½ c. cold coffee

Wash and dry seedless raisins and currants; add seeded raisins, peels, citron and almonds. Mix and sift 3 times, flour, Magic Baking Powder, salt and spices; add fruits and nuts, a few at a time; mix well; mix in suet, bread crumbs, sugar, apple and carrot. Combine eggs and coffee; add to pudding and mix thoroughly. Three-quarters fill greased large pudding mould with batter; cover with wet cookery parchment or with greased heavy paper; tie down. Steam, closely covered for 4 hours. Uncover pudding until cold, then wrap closely and store 2 or 3 weeks. To re-heat pudding, steam 1½ hours. Serve with hard sauce or any other suitable sauce. Yield: 10 servings.

Holiday Dresses



No. 8396—A novel neckline and the very deep cuffs add charm to this pert party dress. Especially appealing in an iridescent taffeta or crisp lace with its full skirt and simple lines. Sizes 12, 14, 16 and 18 years. Size 14 requires 6½ yards 35-inch or 5 yards 44-inch fabric. Width at lower edge of skirt 254 inches. Price 50 cents.

No. 8438—A flattering party dress for every age. A simple flare skirt adds accent to the deeply gathered shoulder and bodice line. Lovely in a crepe or lace. Evening length dress with short sleeves included. Sizes 12, 14, 16, 18 and 20 years; 40 and 42-inch bust. Size 18 requires 4½ yards 39-inch fabric. Price 50 cents.

No. 3714—A daytime or evening blouse that can be as glamorous or as simple as the material you choose. Try it in a metallic striped sheer with gold-cloth collar and belt. Short puffed or cap sleeves and a wide V-neck included. Sizes 11, 12, 13, 14, 15, 16 and 18 years. Size 16 requires 2½ yards 35-inch fabric. Price 35 cents.

**State size and number of pattern wanted.
Write name and address clearly. Note price.
Patterns may be obtained from your local dealer or
order direct from Country Guide Pattern Service, Winnipeg, Manitoba**

No. 3360—An eight-gore skirt to make of taffeta, velveteen or a lightweight wool. Evening length skirt included. Sizes 24, 26, 28, 30, 32, 34 and 36-inch waist. Size 28-inch waist (16 years) requires 3½ yards 35-inch fabric or 2 yards 54-inch. Width around lower edge 124 inches. Price 25 cents.

No. 3689—Make this simple dress of velveteen or a lightweight wool. Bias skirt is in two pieces; the collar may lie open or tie at the neck. Raglan sleeves end above or below the elbow with a narrow cuff. Sizes 12, 14, 16, 18 and 20 years. Size 14 requires 3½ yards 39-inch or 2½ yards 54-inch fabric. Not suitable for plaids or stripes. Price 35 cents.

No. 3373—Simple enough to make of lace this one-piece dress features a moderately flared skirt, a deep collar on the V-neckline and long or three-quarter length sleeves. Sizes 12, 14, 16, 18 and 20 years; 40 and 42-inch bust. Size 40 requires 5½ yards 39-inch fabric. Price 25 cents.

Simplicity Patterns

Maintaining Good Looks

Guarding against results of daily tasks can spell better looks

by LORETTA MILLER

THE occupational hazards, both to well being and good looks, that beset the busy lady, are many and varied. Both the housekeeper and the business girl have problems unrelated to each other's but problems which should be avoided or corrected.

Sweeping the house on a small scale won't cause callous spots on the palms of the hands, but repeated sweeping of large areas day after day may harden the soft cushions of the palms. This condition can be avoided if a strip of flannel or any other soft cloth is wrapped around the handle of the broom or sweeper. Hold the broom as usual and mark it then wrap two five-inch strips, several layers, around the handle. Secure the wrapping with several turns of a cord or heavy thread. This same idea can be used on carpet or vacuum sweeper.

Daily dusting with a soiled cloth is likely to leave the skin of the hands hard, dry and rough. While many women prefer to wear rubber gloves when doing housework involving water or soiled cloths, there are many others, perhaps the majority, who wouldn't think of covering their hands. This latter group won't have a worry about the condition of their hands, if they start their dusting with a clean cloth. But for those who live in large communities where dust and soot settle on every thing, the dust cloth soon becomes soiled and this soil is transferred to the hands. It is not practical to stop midway in the dusting to wash the hands, it is well to scrub the hands as soon after dusting as possible. Use a stiff brush and plenty of lather, dry the hands well and rub a heavy coating of greasy cream well into the skin. Let the cream remain on for a few minutes, then wipe it off with either a soft cloth or tissues, then apply a bit of your favorite hand lotion or hand cream.

IF possible, the dusting, sweeping and such work should be done before the dishes. This gives the hands a good chance to be immersed in hot water after involving them in "dirty work." Of course the hands must be cleansed after the dusting and before washing dishes.

Scrubbing the floors, washing windows, long sessions of dishwashing or having the hands immersed in hot water for any length of time may leave the skin of the hands and the nails very soft. This is the time to apply a special beauty treatment both to hands and nails.

While the hands are not alone in the beauty hazards of sweeping, dusting and dishwashing, they do pay the greater penalty, with posture next in line. Next to standing erect while performing such household chores, and an aid which will make this possible, is to have the table and sink just the right height for the worker. Since all members of the family which enter into these tasks may not be the same height, it may be wise to have a low stool for the short members. A two, three or four-inch stool may be all that is necessary to change these daily chores to pleasant jobs. An ironing board of just the right height is

another big help to the laundress of a large family. A soft pad with which to hold the iron may be useful in warding off calloused palms if the ironing session runs into hours.

The more leisurely tasks of sewing, mending, darning and knitting should naturally be done in a good light to prevent eye-strain and frowning. Posture, too, enters this picture and it's well to have a chair that permits proper sitting up. Then instead of bending over to see the work, it's well to raise the work closer to the eyes. This will avoid slumping.

THE hundreds of daily jobs that make up a housekeeper's day are too numerous to go into here, but if the busy lady will keep a mirror handy and take a minute off now and then to put on lipstick, brush the hair back off her brow and straighten her dress, she will actually feel less fatigued at the end of the day. And what is even more interesting, she will look as fresh as she did when she started.

Whether sitting or standing all day, each has its occupational hazards to be guarded against. Sitting at a desk, whether typing or attending important meetings, becomes tiresome toward late afternoon. This is a good time, then, to get up and stretch, and take a cool drink of water or a cup of hot tea if possible.

Long hours of sitting broadens the hips and unless one is on her guard has a tendency to cause the shoulders to slump. It's not easy to keep one's posture on her mind all the time, but it is well to think of it often and then straighten up. Sitting is less likely to be broadening if one sits correctly.

Just as sewing in a bad light is likely to cause deep furrows on the brow, so will typing in a bad light cause frown lines even on a youthful brow. Squint lines at the outer corners of the eyes, too, may be avoided by placing the light properly to throw sufficient light on the typewriter. If proper lighting does not relieve the strain, then by all means have the eyes examined to determine whether or not glasses are needed.

Many of the hazards that face the business girl also face the busy student. Posture should be carefully watched during one's younger days. Carrying heavy books day after day has often been responsible for growing girls (and boys) having shoulders of different heights. A wise mother of seven children once said that she never permitted her children to carry their books on the same arm every day. She arranged sort of a game so that one day the books were carried on the right arm and the next day on the left. Alternating in this fashion equalized the daily weight between right and left shoulder and prevented sagging of either.

It's easier to ward off damage to good looks than it is to correct frown lines, calloused hands, unattractive complexion or bad posture. The busy student, as well as her busy mother or sister, has her problems to meet. When these problems are faced in time, even before they appear, one is certain to maintain attractiveness.



Once in her life...every woman should have a SINGER Christmas

The surprise of a big red-bowed sewing machine under the tree . . .

The grins of the youngsters who somehow managed to keep the secret. The half-sheepish, half-proud look on Daddy's face ("I kind of thought you'd like it") . . .

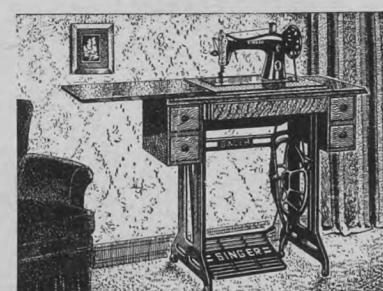
The excitement of lifting the lid—it is a SINGER*, it really is! Trying it for the first time on a piece of Christmas ribbon . . .

It's a thrill every woman should have once in her life, the thrill of

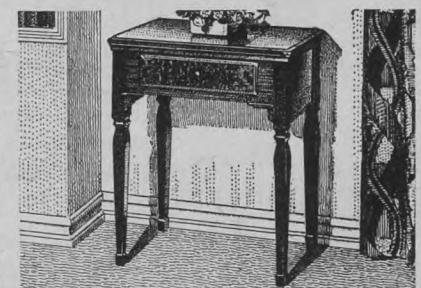
getting a handsome new SINGER* Sewing Machine.

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*A Trade Mark of THE SINGER MFG. CO.

SINGER SEWING CENTERS

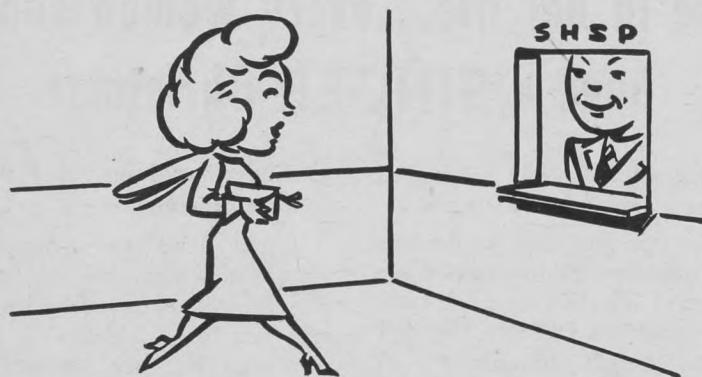
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SASKATCHEWAN HOSPITAL SERVICES PLAN

Christmas Decorations

Try making some unusual decorative articles to add to the festive touches about the home for the holiday season

by PAUL HADLEY



A wide, old frame used for wall decoration. Cardboard tubing makes giant candle. Peppermint candy makes novel "candle."

MANY people prefer to buy their Christmas decorations each year. But there are others, who, perhaps, not having access to shops displaying suitable articles, choose to make their own. There is a certain delight and satisfaction in making use of materials available, not usually considered for this purpose. The possibilities in making suitable decorations are wide and not all of them can be dealt with in the space of one article. A few simple ideas are illustrated here. Others, equally good, may be devised by the imaginative worker.

The candle has long been a symbol of Christmastide, both in the Old world and the New. Candles of infinite design and color, grace mantels, windows and tables. The soft light from a lighted candle lends a kindly glow to faces of people gathered in a room, accents a picture and gives grace to a table setting on many a social occasion.

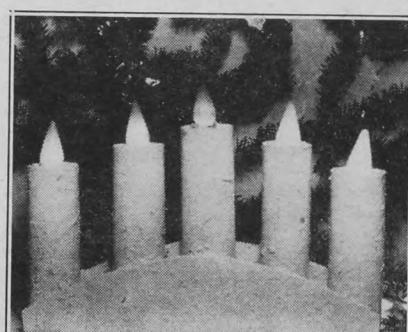
There is a place too, for the artificial candle, particularly where a candle is not intended for lighting. It lends a decorative touch, a bit of color and suggests cheer. Why not make a huge artificial "candle" such as the one illustrated? It has a number of uses for either indoor or outdoor decoration. It can be large enough to be seen from a distance. Such a candle can be set in a wide window—and there is no hazard of flame to nearby hangings. Two huge candles, of equal size, could be used on either side of the doorstep, leading to the front entrance to the house or a pair of smaller ones used as an adjunct to the figures in a manger or creche.

The only materials needed to make such a candle are a length or two of large-diameter cardboard tubing. The one illustrated was constructed from a two-foot length of the casing which came around a linoleum rug. A can of white enamel and a ten-cent box of artificial snow were used to give it an outside finish. Cut a two-foot length (or longer if desired) of the tubing and from pieces of flat cardboard cut disks to fit into the ends. Fasten these in place with glue or household cement. The "flame" is cut from colored cardboard, and is fitted into the slot cut in the top end of the "candle." It is now ready for painting. One or two coats of enamel are applied. While the enamel is still wet, sprinkle the mica flakes thickly over the surface. The flakes will stick tightly and give a rough sparkling finish that is both brilliant and decorative.

The smaller set of five artificial candles shown in the illustration is as easily made and can be decorated with the same materials. The cardboard tubes are those which are commonly used for mailing purposes. Any other cylindrical container of similar size and shape will do. Two strips of flat cardboard form the "sides" of the base, to which the tubes are cemented. Small electric bulbs, such as those which are used for strings of Christmas tree lights are used for the "flame." The wiring is run up through the tubes and the bulbs are set into the tops of the candles. If desired "flames" cardboard may be used instead of real lights. Of course the real lights may be used also on the large "candle" described above.

Possibly you have some old, discarded, wide picture frames in the attic or storeroom. One could be used effectively to frame a wreath, evergreen spray or other Yuletide bouquet. The glass is removed and the "center" hangs in relief against a wall, over the mantel or in some other strategic place. If the frame is given a coat of white paint, the colors of the bouquet will stand out effectively and add a pleasing decorative touch to the room. Small scenes, using toy houses, white or silver painted twigs and other small odds and ends will add novelty to such a "picture." Snow scenes may be built up from cotton batting and artificial snow.

And while speaking of unusual decorations, how about some edible ornaments for the Christmas tree? Candy or popcorn may be strung on strings and used as festoons. Sometimes stores sell candy chains for this purpose. Gumdrops or other soft candies are excellent for decorative purposes. They can be stuck on to sticks, shaped to represent many figures, plant or animal and used as table decorations. The old-fashioned candy canes are back in favor but you may prefer to make artificial canes.



Another "candle" idea, using card-board and electric bulbs.

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Activated Seismotite
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MADE IN CANADA

Sewing Pile Fabrics

Some tips on handling
napped materials

VELVET, corduroy, velveteen, imitation fur and deep pile coatings top the fashion news this fall and winter season. The fabric's rich appearance makes even the simplest dress, suit or coat a pleasure to own and, best of all, you can make your own with confidence, if you follow a few simple rules.

Very little detail is desirable on a garment made of a pile fabric. Outside stitching and details of yokes, tucks or stitched pleats will not show to advantage so choose a simple pattern with a minimum of pieces. Plan to use dome fasteners, ties or loops wherever possible for buttonholes are difficult to make. With an easily draped material such as velvet choose a soft style; for a firm-weave velveteen or corduroy, crisp lines or a tailored style is most suitable. Simplicity is the keynote always.

Depth of lustre comes from the shadow of the pile and is due to light reflection. A deviation in pile direction gives a difference in the amount of reflection and causes one section to look cheap and faded in comparison to other parts of the dress. A raised pile such as in velvet, corduroy or imitation fur must have the pile going upward. Run your hand along the surface of the material in the smooth direction. Place the lower edge of the skirt and bodice pattern piece at the lower end of the cloth. The fabric will feel smooth as the hand is run up the skirt or bodice of the finished garment. A flat nap such as in a wool broadcloth is treated in the reverse.

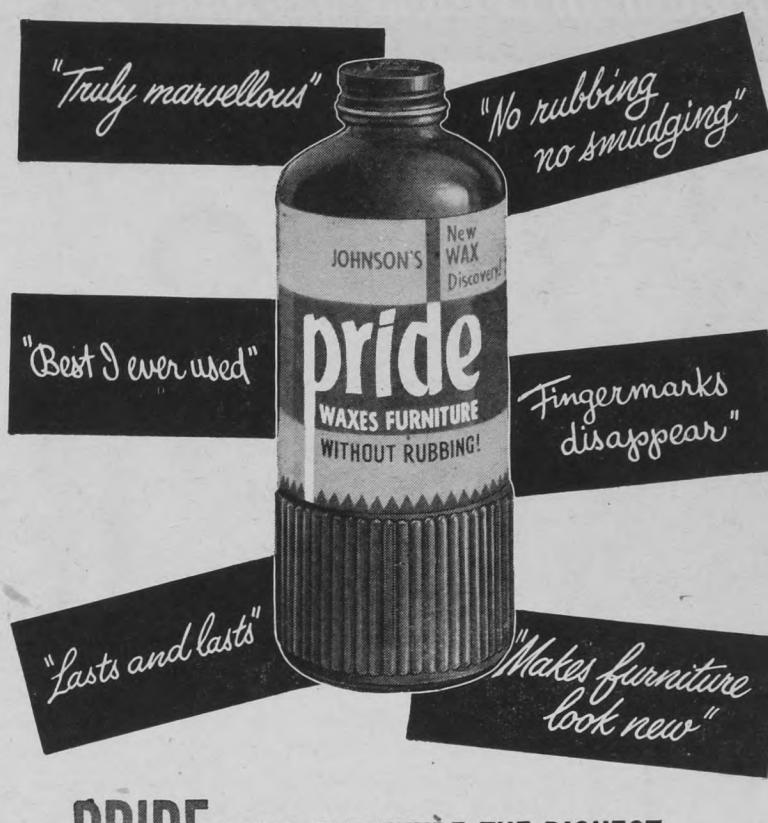
When buying materials you will find that the term pile is used for a deep-textured, rich colored fabric as a velvet. Nap refers to materials with more shine as a wool broadcloth or a satin. On garments made of these materials note that a nap feels smooth as the hand is run down the coat or dress. In piles (velvets or velveteens) smoothness is felt as one strokes upwards.

Check the pattern for yardage requirements for the napped fabric (in patterns all naps and piles are referred to as a napped fabric) and buy the full amount. Don't try to do with less for all pieces must be cut with the pile going in one direction. Even piecing such as might be required at a flare-skirt edge must have the pile in the same direction.

For cutting place the material, pile side up, on the table. Pins should be replaced by needles where possible; any pins which are used should be of fine brass. Always place them inside the seam line to prevent marking the garment. Extra basting is required for any napped fabric, especially for a velvet. A line once stitched will always show so baste and fit carefully before using the sewing machine. Use nylon or silk thread for both basting and stitching. They show less and will give more easily with the material.

TO stitch velvet place a strip of tissue paper between the material and the pressure foot of the machine to prevent slippage. Use a fairly loose tension and a slightly longer stitch to allow ample room for the pile. Press each piece as it is finished. Be extra

Canadian women say



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LONGEST-LASTING WAX LUSTER YOU'VE

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NO RUBBING!

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Get the original in New Blue and White carton.
Made by the makers of BABY'S OWN TABLETS.

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21 Boyton Rd.,
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May 21, 1951.

Aluminum Company of Canada, Ltd.,
c/o Dept. of Information,
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Montreal, Quebec.

Dear Sirs:

I have used aluminum cooking utensils for the past twenty-four years and they are still as good as new. Our family of two girls and a boy, now all married, are living examples of the health retaining benefits of foods cooked in my aluminum ware. I heartily endorse the cooking qualities of aluminum utensils and believe they are indispensable for the modern homemaker.

Mrs. Florence Sutton

Mrs. Florence Sutton,

"The proof's in the eating"...

AGREE THREE SMILING GENERATIONS

Good cooks are proud of their favourite recipes. And when they find utensils that cook food well, preserve flavour and quality, and clean easily, they're proud of them, too. That's why so many homemakers write in to tell us about their aluminum utensils. Aluminum has been a Canadian kitchen favourite for half a century. So many mothers do more than teach their daughters to cook; they teach them to use good utensils, too!

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careful not to leave a mark with a hot iron. It will be difficult, perhaps impossible, to remove.

To press the seams open fit the material over several Turkish towels, moisten and press lightly with the tip of the iron. To press the completed garment a steam iron is perhaps the best. Use several thicknesses of towels under the garment, which is placed right side up on the ironing board. Steam without touching the iron to the material.

To press velvet with an ordinary iron extra care is needed. Place the garment right side up over several thicknesses of towels. Over the velvet place a damp press cloth. Touch the hot iron to the press cloth only, allowing the steam to reach all parts of the

velvet. The garment may also be steamed by hanging it over a bath tub of hot water for half an hour. Bad wrinkles can then be removed by steaming them over the spout of a tea kettle. Be careful not to scald yourself. Allow the dress to hang and dry thoroughly before hanging away. Never crush it into a tightly packed closet or garment bag.

As velvets are inclined to fray at the seams be sure to finish all raw edges. Very fine seam binding is satisfactory or the edges can be overcast with silk or nylon thread. Apply any binding or seam facing loosely and keep the tension on the sewing machine loose. Steam the hems and facings carefully for a professional look.—L.V.

Knit These for a Man

Design No. K-60 and No. K-64

Nothing ever takes the place of hand-knit garments in a man's wardrobe. This matched set of pullover and socks includes all three patterns . . . and each pattern a popular and easy-to-work idea. There is the cable; the shadow diamond and the rib. Socks, including the three patterns, is No. K-60, price 25 cents. The pullover comes in sizes 36 to 42. It is No. K-64, price 25 cents.



Note correct number of article wanted.

Send proper amount in payment.

Address orders to The Country Guide Needlework Department, The Country Guide, Winnipeg, Man.

Painting on Glass

Continued from page 39

now, but the set costing about \$2.75 is a good one to start with.

At first my pictures were mostly of flowers, plants and nature scenes. Lately I have painted "portraits." I take the children's portraits as models, and I flatter myself that the likeness is rather startling.

Last Christmas I tried something different. I bought a number of inexpensive water glasses and taped my model picture inside. The oil painting on the outside, sometimes with someone's name or initials in appropriate lettering below, made highly acceptable yet inexpensive gifts. You may buy pretty and inexpensive little vases, jars and glass cigarette boxes at the 15-cent stores and make attractive ornaments for a dressing table or a shelf. There is an unlimited field of possibilities here for Christmas, birthday, anniversary and general gifts. You will enjoy oil painting on glass. Try it.—Margaret M. Christensen.

Warm 'n Cozy



Pattern No. K-53

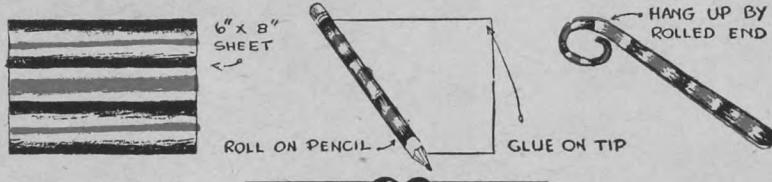
Who cares if thermostats have to be turned way down low? All we need is one of these cozy shoulder huggers and we're as warm as a bunny. For the fringe we alternated white and turquoise. The shawl fits so snugly it can be worn under a coat or as a head bandana with sports clothes. Pattern No. K-53, price 25 cents.

The Country Boy and Girl



NO wonder we have chosen the evergreen tree to brighten our homes at Christmas time for when all the other trees stand bare and grey, the little evergreen tree gives a gay touch of color to our winter world. We bring this tree into our homes and decorate it to add to our happiness at Christmas time.

You will have fun making these paper imitation candy canes to hang on the branches of your tree. Use a sheet of paper about eight by six inches. Now color with crayons a strip of green about one-half inch wide right across the long side of your paper, then a strip of red the same width, then green and red again and so on until you have colored the whole sheet. Now, beginning at one corner and with the colored side out, roll your paper on a pencil until it is all rolled up. Let the pencil drop out, then fasten or paste the end of the paper so it can't unroll. Now press flat about three inches at the end of your paper roll to form the handle of the cane. Curl this handle by rolling it on your pencil so that your paper cane will hang on your tree. You could make paper candy canes of many different colors for your trees.



The Fairy Roadway

by Mary Grannan

ONCE upon a time, there lived a little boy named Danny Doolittle, and Danny had a loose tooth that wiggled. Of course Danny wiggled the tooth with his tongue, north, south, east and west. One morning, when that loose tooth was pointing north like a baby elephant's tusk, Danny's mother said, "Darling, will you please get that tooth out today?"

"Mum, if you don't mind, I'd rather not. It's a good tooth, and it's not aching, and besides people wouldn't want to see me with a hole in the front of my mouth."

Mrs. Doolittle laughed. "I'm sure they'd rather see you with a hole in your mouth, than to watch you wiggle that tooth up and down. And the tooth wants to come out, you know. It's loose because it's making way for a larger new tooth behind it. And if you don't get the little wiggling one out, the new one may come in crooked. You wouldn't like that, would you?"

"Oh, I don't think I'd mind," said Danny.

Mrs. Doolittle shook her head. Really, Danny, you are behaving badly. I want you to get that tooth out today, and I'm sure the fairies do, too."

"What have the fairies to do with it?" asked the little boy. "What do they want with my tooth?"

"I don't know what they want with my tooth, but I know that they do leave a silver coin for every tooth they find under a little boy's pillow," said Mrs. Doolittle.

Danny roared with laughter. "Mum Doolittle," he said. "You made that story up this very minute, didn't you?"

"That's an old old story. I heard it when I was a little girl. In fact, I got ten cents for a tooth of mine once. A

me something? Why did you tie this tooth to your finger? If you don't want me to have it, say so, and I'll take back my silver piece."

"Oh, I do want you to have it," said Danny. "I do want you to have it, but I'd like to know why you come for white pearly teeth and why you never take the . . . uh . . . the other kind."

"That's easy to answer," laughed the little man, breaking the tooth from the string. "We use the teeth to build roadways in Fairyland. Strong white teeth make beautiful, strong, white shining roads for our fairy feet. You should see the beautiful roadways we have built."

"I'd like to see them," said Danny, "if you will take me to Fairyland, I'd be very happy."

"I'll take you to see the roadways, if you promise to tell all your friends to take care of their teeth for us. Will you do that?"

Danny promised. And then . . . there was a flash of light . . . a low, rumbling, and Danny was in Fairyland. He gasped in delight at the long and winding white roadways that lay before him. He could understand now, why Jimmy's tooth had not been used.

"Fairy," Danny said, "how do the children get teeth like these?"

"How did you get your own?" asked the fairy. "You brushed them every day. You drank milk, and you ate vegetables. You ate candy and sweets too, of course, but not too much. That's the way to get good, strong, white teeth."

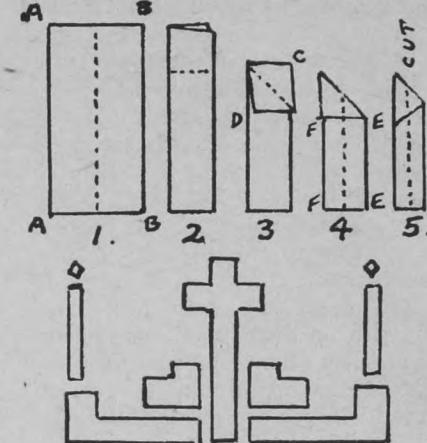
"I'm very proud that you're using mine on the fairy roadway," said Danny. "I'm very proud, indeed."

Danny kept his promise. He told all the boys and girls around, about what happened to him. After that, in the mornings, all over the town, you could hear the swish, swish, swish of toothbrushes.

With a Snip of Scissors

JUST like magic, with only one snip of the scissors you can make this nine-piece set of altar, cross and candles.

Get a piece of paper twice as long as it is wide. A good size to work with is a rectangle three inches by six inches. First fold side A over to meet side B along the dotted line shown in figure 1. Now you have figure 2. Next fold down enough of the top to form a square (figure 3). Your third move is to fold corner C over to D along the dotted line of figure 3 to get



ALTAR, CROSS, CANDLES.

figure 4. Lastly, fold side E over to side F along the dotted lines shown and you will end up with figure 5.

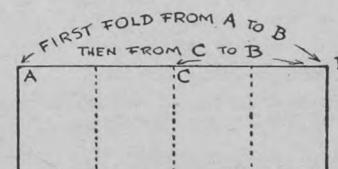
Now you are all ready for the magic snip of the scissors. The cut is made along the dotted line of figure 5 running up the center, and the result is nine separate pieces which you will be able to place together in various ways to build up an altar with its cross and two burning candles.

You can make some very effective Christmas or Easter cards this way if you use colored paper and paste your design on cardboard. You will find it best to start with a piece of paper about four by two inches and if you use a sharp pair of scissors and do the folding carefully you will be able to make some really neat cards.—Walter King.

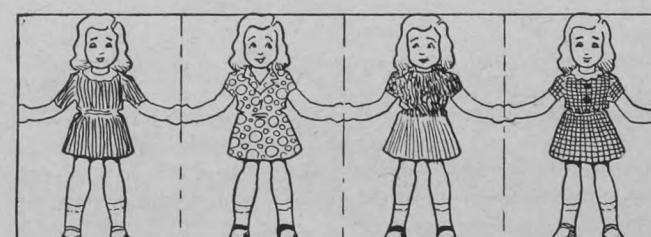
Little Girls and Dancing Indians

WOULD you like to make a border for your blackboard at school or for decorating a box or cupboard? Once you know how to fold the paper you can make all kinds of designs of your own. Here are designs of little girls and dancing Indians for you to try out.

Use a sheet of paper 12 inches long and six inches wide. Now fold it first in half and then over into half again, so that it makes one section as shown in figures A and B. Now draw the outline of a little girl or Indian as shown. Then by cutting along the solid black line you will make four little girls or Indians. With your crayons draw and color dresses, stockings and slippers for the little girls and fancy beaded jackets and moccasins for the Indians. —A.T.



CUT OUTS



IT is now 60 years since I came to Manitoba on the harvest excursion of 1891. I landed at Dauphin and, after the harvest season, homesteaded on the bank of the Valley River. Having been a berry picker in Ontario since I was big enough, I had managed to learn quite a bit about fruit; and after homesteading I began investigating all the native fruits available in the surrounding country, and planting them in my garden. These, together with the garden seeds I planted, enabled me to live quite an enjoyable life.

Soon a few neighbors began to come to my place to pick the currants and gooseberries. I was very glad to furnish them and help pick them too, with no thought of charging for them. They often expressed their delight at the opportunity to get improved wild fruit so conveniently.

We all pulled together, in those days, around the turn of the century; and neighbors were in the habit of giving each other all the help possible, especially when there were log buildings to raise, wood to saw, or wells to dig. Farmers are still friendly, of course, but the old days seem to have gone, probably forever.

SOMETIME prior to 1920, in Dauphin, I hired a young man to work for me. He was a nice pleasant young American who had come to Canada because of some private affair. His given name was Jack, and he said he had gone to the Agricultural College in Brookings, South Dakota, and had been a pupil of the late Dr. N. E. Hansen. I had already corresponded with Dr. Hansen on horticultural matters, and I was interested in Jack's description of him as a very amiable but absent-minded professor.

Jack was very fond of fruit, and particularly fond of chokecherries, of which we had about a mile on both sides of the Valley River. One day, near where we watered the horses, he found a nice tree, perhaps overripe, with the mildest, sweet black chokecherries, and remarked: "I'll bet Professor Hansen never saw such sweet chokecherries." Thereupon, I picked some and sent a package of them to the celebrated horticulturist. Shortly afterward, I received a letter, congratulating me on having discovered what he later called, "the Bougen Sweet Chokecherry." He proposed to graft it on a Mayday tree, a related stock which he had brought from Russia.

The late Dr. Hansen made many trips to Russia, sometimes going all the way across Siberia by post-horse. He later told me that on these journeys the friendly Russians of that period, at every little town where he stopped, insisted, as a form of welcome, that he drink a large amount of koumiss, which was considered to be a desirable fortification against the fatigues of travel in a Russian pony-cart over a rough trail. Koumiss, Prof. Hansen said, is fermented mare's milk. He never admitted he liked it, but in Russia you did what the Russians did, even before the days of Stalin, Molotov, Vyshinsky and Malik.

Times have changed. The Russian government used to send two small printed booklets to horticulturists on this continent. These contained lists of seeds available for distribution from all their experimental farms in Russia and Siberia. Seeds were offered free, and one was expected to mark in

Exploring the North with Hansen

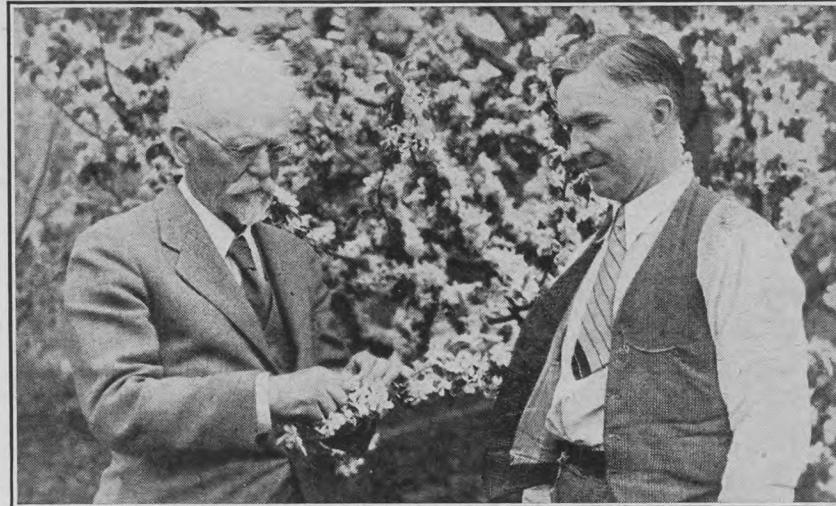
Some reminiscences of fruit exploration in northern Manitoba and Saskatchewan with the late Dr. N. E. Hansen, of South Dakota

by W. J. BOUGHEN

each book the kinds desired, and keep one as a check and send the other back to Russia. Later a bag containing packages of seed was sent, free of charge. On one occasion, I was asked for some Canadian seeds and cuttings which I posted to them. Those days are probably gone forever, also.

ONE day, Dr. Hansen telephoned me from Dauphin. He had come up from South Dakota to get some plants of our wild grape, which grows in a bush just south of Dauphin, in Township 18. It is the farthest-north

One spring, after we had shipped out our nursery stock orders, which had accumulated during the winter and spring, Dr. Hansen came to Dauphin prepared for Arctic exploration. Up to that time, which as I recall it was somewhere in the Terrible Thirties, he was certainly the outstanding horticulturist to date in the development of fruit suitable to the states near the international boundary—the Dakotas, Minnesota, Montana. At any rate, this time he wanted to go to the North Saskatchewan River at Fort LaCorne. He wanted me to go



The late Dr. N. E. Hansen at the Morden Experimental Station, with W. R. Leslie, superintendent, discussing some knotty fruit-breeding problem.

wild grape in America. Dr. Hansen wanted some to use in his attempts to breed hardy grapes for the prairies.

I said I had a few plants and, while talking with me, he heard sounds of children back of the phone, and asked if we had children. I replied in the affirmative, and when he arrived a half hour later he had brought a box of McIntosh apples for the children. He was a benevolent-hearted man, and I always found this kind of thing characteristic of him.

He discovered that I had seven wild grapevines, but he wanted many more, and asked me if I would go to where they were and dig for the afternoon; if I would, he would keep me at the Hamilton Hotel, and send me home in the morning. I agreed, and away we went to the foot of the Riding Mountain, which at its highest point is about 1,900 feet above sea level. We drove into the yard of Mr. Lefleur, an old friend, and Hansen hired him to show us the best place to dig grapevines. In some places there were vines up to 30 feet high in the white poplars, and we dug vigorously until late afternoon. We loaded the pieces of grape stems, with some roots attached, into the back seat of an open car, and the bound, stringy grapevines were visible to people along the road.

A week later, a friend accosted me and said that he wouldn't tell anyone, but he had seen me and "the man with the white goatee" coming out of the mountain with a moose in the back of the car. In any case, it was grapevines that we unloaded into the sample room of the hotel, and packed after supper into several bales of wild graperoots, which were shipped back to Brookings. I never heard of any grape hybrids which resulted from our endeavors.

Horticultural Station at Brooks, Alberta. These are very good dark-fleshed plums, but not quite as good as Dr. Hansen's original Oka.

We went to Beatty by train, and arrived some time during the morning. The spring thaw was on, and the water was running down the ditches alongside the tracks. When we got to Beatty, we finally located a big boy who had a team and a democrat. We started toward Fort LaCorne, walking behind the team and looking for sandcherry bushes which we had been told were to be found here and there. On one part of the trip, we were walking with a young man of foreign extraction who thought he could show us what we were looking for. As we passed a settler's shack, he called to an old man, who came out to the road, and the two foreign-speaking people talked vigorously in a language I did not recognize. Finally, Professor Hansen began talking to them in their own language. I never found out what was said, but I noticed a sharp start, and a reddening of their faces. We soon passed on.

Notwithstanding all the rumors and the information about sandcherries, we found nothing near Fort LaCorne. We stayed the night with an old couple who had been there some 40 years, but they knew nothing of any sandcherries.

By the time we got back to Beatty we had been out three days. After the team had been put in the livery barn and the three of us had had supper in the restaurant, Dr. Hansen said to the young man, "Well, what do I owe you?" He replied, "well, I couldn't do it for less than \$15." The professor smiled slightly as he pulled out his roll and peeled out the money.

THERE was no hotel at Beatty, and we slept in two beds over a store. The next morning, I was up first, and when I was ready to go downstairs Professor Hansen was out of bed, and he said anxiously, "Do you see my roll of money anywhere around?" I looked around, and said, "No." After searching all his pockets, Professor Hansen said, "Since you are dressed, would you mind going down to the restaurant and see if it is on the floor?" I went down quickly, and the Chinaman was sweeping the floor, but he said he hadn't found any money. So the professor's money was lost. I met a man on the street who said he had written me for some Hansen cherry-plum hybrids, so I sold him \$10 worth and very gladly took the cash. When the professor's precious money did not arrive, I went into the Bank of Commerce and explained our plight to the manager. After I said that I had no money in the bank, he told me to write a check and pay it when I got home, so I took \$30, which turned out to be less than enough.

However, we went back to Hudson Bay Junction, where there were lots of sandcherries on the ridge, and Professor Hansen and I dug some 200 plants, bound them up, and put them on the next train. In any case, I doubt whether sandcherries would need to be as hardy at Hudson Bay Junction, where there is heavy snow all winter, as on the windswept prairies of South Dakota.

The end of the experience came when Dr. Hansen sent me a cheque after he got home, and I in turn sent one back to Hudson Bay Junction to pay our hotel bill.

WILLIAMS County, North Dakota, is the second county south from the Canadian line and borders the state of Montana on the west. This means that it lies directly south of Weyburn, Saskatchewan; and a study recently made by the Farm Credit Administration of the United States as to the variations in wheat yields in western North Dakota is of more than passing interest to Canadians.

The leading cultivated crop in Williams County since its settlement has been spring wheat. Settlement up to 1900 had resulted in the establishment of only 122 farms, containing only two per cent of the land of the county. By 1910, 58 per cent of the land was settled in 2,602 farms, and by 1920, 72 per cent of the area was settled. Williston is the county seat, located on the Missouri River at an altitude of 1,878 feet.

Precipitation averages 14.1 inches, of which about half falls during May, June and July. The average growing season is 133 days, and the frost-free season is between June 10 and September 3.

During the 30 years 1920-49 inclusive, average yields were 11 bushels per acre, the first ten years averaging 12.2 bushels per seeded acre, the 30's four bushels, and the 40's 16.8 bushels.

Predicting the probable course of yields, moisture and other factors making for satisfactory production, is ordinarily difficult in spring wheat areas of the northern Great Plains, be-

Consequences of Yield Variation

A study of wheat yields in one North Dakota county since 1920

cause a ten-year average for a locality is not likely to be a sufficiently accurate guide. The study in question suggests that in northwestern North Dakota at least a 20-year average is needed. This has its disadvantage, because methods of tillage, suitability of varieties, the trend of prices, the character and amount of farm power, may all have changed to the extent that, to bring the 20-year average in line with current conditions, would require some adjustment.

The New York State College of Agriculture, in commenting on this study, suggested also that to the young man beginning to farm, the big question is not the 20-year average, but the crop yields and prices during the first few years of his operations.

The average values of the wheat crops of the three decades under study were \$14.03 during the 20's, \$2.84 per acre during the 30's, and \$26.04 during the 40's. During the poorer years of the 30's, the yield per seeded acre was less than a half bushel per acre, and the highest average yield in any year was 8.3 bushels per acre, while the average price was 38 cents per bushel.

Weather records do not go back far enough to give any clear answer to the question as to how frequently a drought period, such as that of the

30's, may be expected. Studies of tree rings in the vicinity of Bismarck in central North Dakota seem to show that during the past 350 years there have been four periods of at least 15 dry years in succession. These are estimated to have occurred in the periods 1586-1611, 1633-49, 1836-51 and 1922-37.

It seems to be true that long dry periods may be followed by long wet periods, or by short ones. The reverse also seems to be true. In 1942 and 1943, in Williams County, yields of 23.8 and 24.8 bushels per seeded acre were secured. Moreover, the lowest yield per acre during the 40's was better than the highest yield in the 30's. In Williams County, as in prairie Canada, yields and prices during the 30's were so low that farm operations were maintained only through some form of governmental assistance; and it is noted that few farming regions in the United States have experienced

a greater range of depression and prosperity.

Excluding the city and villages, the remaining population of the county declined by 30 per cent from the 30's to the 40's, but the advance of mechanization, it is believed, would have produced a modest decrease in rural population from 1930 to 1940 in any case.

It is recorded that by May of 1938, three out of every four farmers in the county were receiving grants from the Farm Security Administration. The situation was extremely serious, but the drastic change which developed in the 40's is indicated by the fact that the 1945 census of agriculture showed that in 1944 the average value of farm products sold or used in farm households was \$6,270. This, Cornell reports, was not equalled by any county in Michigan, and was exceeded by only one in Wisconsin and by only three in Minnesota.—H.S.F.

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Mistaken Identity

FROSTBITES and chilblains are like old wounds; the damage done is felt for years afterwards. The hands of farmers are menaced by cold winter weather. The circulation of frozen hands (and feet as well) should be restored slowly. It is an old rule not to expose frozen limbs to a hot stove or fire, since severe pain and lasting damage may result.

Two types of men are particularly exposed to frostbites and chilblains. There is the fat and somewhat phlegmatic type, with rough, dry skin on the back of the upper arms and on the legs below the knees. There is also the thin, highly strung, rather nervous type, with a general tendency to cold and bluish limbs. The latter ones have frequently catarrhs of the respiratory organs as well.

Cold is the external cause of chilblains. Footwear which is too tight, is a common cause. The blood cannot circulate properly if the foot is pressed by a tight shoe. The skin cannot be properly nourished this way. Tight hose may cause the same effects, and so do tight gloves on hands and fingers. Toes and heels are mostly affected. Chilblains usually make their first appearance in damp cold weather and disappear during the summer months.

For the prevention of chilblains warm and roomy shoes are essential. Shoes which have the proper shape and the right size, still may be too small for the foot if woollen stockings take too much room. Laces should not be tied tightly in cold weather. Running barefoot in summer is an excellent exercise for the circulation of the blood.

From late fall onwards a foot bath of salt water, with the chill taken off, may be taken every night. The feet then should be dried thoroughly with care, and rubbed vigorously with a rough towel to stimulate the circulation.

There are many local applications to relieve the unpleasant sensations. Broken chilblains need careful treatment because an infection of the whole leg may result from a small injury of the foot.

The Guide issue of October carried an article on trapping by B. G. Roberts. With it appeared a photo which we mistakenly informed our readers was the author of the article. Actually it was a picture of T. R. Updike of Love, Sask., to whom our apologies are extended. The picture of Mr. Roberts which should have gone with the article is the one above.

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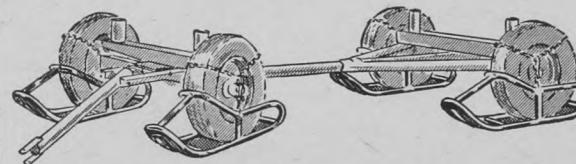
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Final Payment 1950-51 Crop

With much of their 1951 income still out in the fields, farmers will welcome Hon. C. D. Howe's announcement on November 19 on final payments for wheat of the 1950-51 crop delivered to the Wheat Board. The payments to farmers total \$105 million, and raise the payment per bushel from \$1.855 for No. 1 Northern down to \$1.466 for feed wheat, basis Fort William. There will be some difference of opinion as to the acceptability of the upper price range. American prices, as reported by the National City Bank of New York, began the crop year at \$2.15 and ended it at \$2.39. It will be remembered, however, that the IWA took the bulk of Canada's millable wheat at a pre-arranged price fluctuating around \$1.89, and that the domestic consumer is getting a bargain price on another 50 million bushels.

The surprising feature of the final settlement is in the price paid for the lower grades. Some dissatisfaction on spreads was expressed when initial payments were first announced. The final payment narrows the spreads closer than the average marketing pattern of recent years, according to some competent observers. In spite of the fact that 150 million bushels of the 1950-51 crop came into the grades 4, 5, and 6, the Wheat Board's selling policy has been so successful that the prices of these lower grades has not been unduly depressed.

The closing of the books of the 1950-51 crop does not mean that all the grain has been disposed of. Some 93 million bushels, mostly low grade grain, have been turned over to the succeeding year's pool on the basis of the Wheat Board's asking prices as of October 20, less an allowance for continuing charges and market risks. Any profits from the final sale of this wheat will accrue to those delivering wheat to the 1951-52 pool, and conversely any losses will be borne by them.

Coarse Grains Vote

On November 24, 34,606 Manitoba farmers went to the polls and cast their ballots nine-to-one in favor of continuing the present method of marketing coarse grains. It is a rather significant vote. As 67 per cent of those qualified to vote did so, it may be taken as a fair indication of Manitoba farm opinion. As the sentiment for the return to open marketing is probably stronger in Manitoba than in the two provinces to the westward, similar referenda held in Alberta and Saskatchewan would be expected to confirm the Manitoba vote.

This decision, registered by bona fide grain growers only, is no surprise, except perhaps for its overwhelming majority. It was believed that some of the districts along the south border of the province, which would be free to truck their coarse grains to American points if open marketing were resumed, would vote "No." An analysis of the vote seems to indicate that even in these parts of the province opinion is of the same mind as elsewhere.

Previous to taking the vote there was divided opinion as to the propriety of the wording of the question put before the electors—do you wish to continue to sell your barley and oats as at present? This form of words is satisfactory for those who would approve, but it does not provide for expressing shades of opinion by those who would like some change. These fall into at least two classes: those who would have the Wheat Board discontinue the marketing of coarse grains altogether; and those who believe that growers should be free to choose between the Board and the open market, which two forms of marketing, they contend, could continue to operate successfully side by side. Assurances were given that in the case of a negative vote the province would cancel its complementary legislation, in which case the federal legislation would become

ineffective, and the open market would be the only channel for marketing. In these circumstances those who wanted the grower to be able to choose between the Board and the open market, although in reality favoring a change, were obliged to vote "Yes." It will remain an open question as to how large this group is, and whether a different form of question would have affected the result.

In any case, it will be noted that the vote touches only one aspect of grain marketing. It settles the question of compulsory marketing through the Wheat Board. It has nothing to do with the operation of bulk contracts such as those which have governed the sale of wheat since 1946. It has nothing to do with the manner in which the Wheat Board is being used to depress domestic wheat prices in order to keep down the cost of living at the expense of grain growers, whose costs are being allowed to rise without let or hindrance. The flagrant injustice caused by the latter policy needs no referendum to correct.

Old Age Pensions

On January 1, Canada enters into a new era with respect to old age pensions. Through the Old Age Assistance Act passed at the last session of parliament, 145,000 needy persons aged 65-69 will, for the first time, become eligible for pensions up to \$40 a month, subject to the means test. Under the Old Age Security Act, passed last month, all persons aged 70 or over will receive a uniform pension of \$40 a month without the means test. The cost of the latter pension will be borne exclusively by the federal government, whereas the former will be borne equally between Ottawa and the province in which the pensioner happens to live.

The Guide joins the overwhelming proportion of its readers in rejoicing with the pensioners on the improvement in their lot which should follow this settlement. It is entirely in keeping with the quickening of public conscience all over the civilized world regarding the condition of its ineffectives. The nation can take some credit for itself in the manner in which all shades of opinion pressed for some broadening of the old age pension base. As has been said by others, it is a significant indication of the national confidence that the introduction of universal old age pensions should have been attempted at a time of mounting burdens on the taxpayer for other purposes.

There is, of course, a sobering side of the picture which unfortunately is not brought home to all. The over-all expenditure for the federal government involved in the passing of these two acts will be between \$355 and \$370 million. When the pension plan was still in the discussion stage, a joint committee of the Senate and the House wisely ruled that the pension from age 70, being advanced as a matter of right, should be financed by methods "requiring a direct and conscious payment by the largest possible number of those who will benefit from the program."

Taxpayers know now how the money is to be raised. Those who pay income tax will be charged another two per cent, with a ceiling of \$60 annually on the tax individually paid. This is estimated to yield \$95 million, which because of the \$60 feature, falls disproportionately on middle income people and not on large incomes. Corporation income tax is to be increased to yield an additional \$65 million, and two per cent of the sales tax will be earmarked to provide perhaps another \$145 million.

Except for the portion of the Canadian public paying personal income tax—which is less than half of those gainfully employed—it cannot be said that the principle laid down by the joint parliamentary committee has been honored. The small man whose modest store purchases cost just a little more because of a ten per cent instead of an eight per cent sales tax isn't aware that he is helping to pay the old age pension. Nor is he aware of it when he pays just a little more for the product or services of some corporation which raises its take to compensate in part for the higher corporation tax. It is "lost in the shuffle." The method by which the necessary money is raised does nothing to break down the widespread notion that government benefits are "for free." We doubt if anything less than a contributory pension plan will ever bring home this realization.

Further Inflation Ahead

The federal government's half-yearly budgetary surplus of \$513 million has not failed to draw fire from its critics. Canadians, they charge, are being grossly overtaxed.

The surplus is almost entirely explained by the comparatively slow rate of rearmament expenditure. The last session of parliament appropriated \$1,729 million for this purpose in the present fiscal year. Of this amount only \$470 million, or 27 per cent of the whole was spent in the first six months. But the rate of spending involved in preparedness may reach \$125 million a month before the end of 1952, according to the forecast of the Minister of Defence. As the rate of spending increases Mr. Abbott's source of surplus will disappear.

Those who look at this rising tide of expenditure in terms of inflation remember also that hand in hand with direct military disbursements Canada is spending unprecedented amounts in developing resources of strategic importance. The value of certain expansion projects now being undertaken for completion in 1955 or earlier amounts to \$2,537 million, according to the Bank of Montreal November Business Review. By virtue of this development, Canadian capacity for the production of crude petroleum will be tripled, and iron ore output increased five-fold in the period 1950-55.

The amount of money poured into these two streams, according to the latter institution, presages continued high levels of business, but also constitutes a warning that fundamental inflationary pressures may not yet have run their full course.

Misleading Figures

There is an old crack which admits that figures never lie, but asserts that liars have a habit of figuring. This ought to be widened to take in those people who would not deliberately lie, but who use statistics whose full import they do not comprehend, but which certainly tend to perpetuate untruths.

We are reminded of it by the protest which the Federation of Agriculture has continually directed at the Dominion Bureau of Statistics regarding the base period used for computing indexes of various prices. The Ottawa Bureau uses the period 1935-39 for its comparisons. Press writers, and others who wish to flail farmers' organizations, make the most out of the DBS figures built on this comparison to show that food prices have risen higher than others and are thus to blame in very large measure for the soaring cost of living.

Every person who had to make a living out of a farm between 1935 and 1939 knows that agriculture was then in a depressed state. They know that even in a normal balanced recovery food prices based on an index so conceived would show up badly. How much fairer it would be to take for the base period a year like 1926 when, as most economists will agree, a very good economic balance was attained throughout Canada.

But taking the DBS figures at their own valuation, it is instructive to look at some other prices. The food price index looks modest compared to some of the common stock prices. For instance, quoting the Federation Bulletin, "DBS figures show that the price index of 105 common stocks as of August, 1951, was 169.7. Industrial stocks, 52 of them, show an index of 174.5. But the index of machinery and equipment shares has attained the magnificent height of 419.2 compared with 1935-39, and pulp and paper stocks have risen to an index of 588.5, textiles and clothing stocks to 366.3, beverage shares to an index of 419.9, while the shares of food and allied products have risen only to an index of 118.4."

Applying DBS figures to the more logical base period of 1926 one discovers that general wholesale prices show a rise of 112.4 points. Wholesale prices for farm products show a rise of 119.4 points. The index price of the things farmers buy has risen 102 points. The index of farm living costs has risen 76 points since 1926, while urban living costs have risen 62.3 points. It is no academic argument that the Federation is advancing. The whole case for successive wage and price rises is based on misconceptions rooted in the DBS persistence in the use of a faulty base period for comparison.